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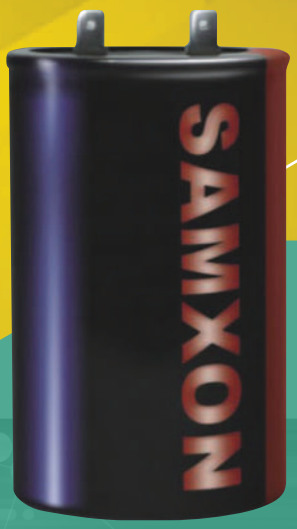
SAMXON®
Aluminum Electrolytic Capacitors

SAMXON

Aluminum Electrolytic Capacitors



RoHS Compliant

Halogen Free

PRODUCT CATALOGUE

QC 080000

IEC QUALITY ASSESSMENT SYSTEM (IECQ)
covering Electronic Components, Assemblies, Related Materials and Processes

IECQ Certificate of Conformity
Hazardous Substance Process Management

IECQ Certificate No.: IECQ-H BSI 09.0011 | Issue No.: 6 | Status: Current
Supersedes: IECQ-H BSI 09.0011 Issue 5 | Issue Date: 2018/08/06 | Org Issue: 2009/07/28
CB Reference No.: HS01657 IECQ | Expiration: 2021/07/25

Applicable to:

- European Directive 2011/65/EU ("RoHS – Restriction of the use Of certain Hazardous Substances") in electrical and electronic equipment, including all published amendments
- European Directive 2012/19/EU ("WEEE – waste electrical and electronic equipment") recast
- European Regulation EC No. 1907/2006 ("REACH") and its amendments
- China – RoHS 2 2016-01-21 (Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products)

Samxon Electronics (Dongguan) Co., Ltd.
Xinxing Industrial Area, Xingfa South Road,
Wusha Community, Chang'an Town, Dongguan
Guangdong, 523860
China

The organization has developed and implemented Hazardous Substance Process Management processes and related processes which have been assessed and found to comply with the applicable requirements for IECQ HSPM organization approval which is in accordance with the Basic Rules IECQ 01 and Rules of Procedure IECQ 03-5 "IECQ Hazardous Substances Process Management" of the IEC Quality Assessment System for Electronic Components (IECQ), and with respect to the IECQ Specification:

- IECQ QC 080000:2017 - Hazardous Substance Process Management System Requirements

This Certificate is applicable to all electronic components, assemblies, related materials and processes for the following scope of activities:
Design and Manufacture of Aluminium Electrolytic Capacitors

Issued by the Certification Body: BSI
Kitemark Court, Davy Avenue
Knowlhill, Milton Keynes MK5 8PP
United Kingdom
Authorized person:
Paul Turner

bsi.

ISO 9001 ISO14001

bsi.

By Royal Charter

Certificate of Registration

质量管理体系 - ISO 9001:2015

兹证明: 力格三信电子（东莞）有限公司
91441900712210962 4
中国
广东省
东莞市
长安镇
乌沙兴发南路
新星工业园
邮编: 523860

Samxon Electronics (Dongguan) Co., Ltd.
Xinxing Industrial Area
Xingfa South Road, Wusha Community
Chang'an Town
Dongguan
Guangdong
523860
China

持有证书: FM 76838

并运行符合 ISO 9001:2015 要求的质量管理体系，认证范围如下：

铝电解电容器的设计与制造。

The design and manufacture of aluminium electrolytic capacitors including.

由以下代表: Chris Cheung，亚太地区 合规风险主管

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最新发证日期: 2018-08-02
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Page: 1 of 1

...making excellence a habit.

bsi.

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Certificate of Registration

环境管理体系 - ISO 14001:2015

兹证明: 力格三信电子（东莞）有限公司
91441900712210962 4
中国
广东省
东莞市
长安镇
乌沙兴发南路
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邮编: 523860

Samxon Electronics (Dongguan) Co., Ltd.
Xinxing Industrial Area
Xingfa South Road, Wusha Community
Chang'an Town
Dongguan
Guangdong
523860
China

持有证书: EMS 88881

并运行符合 ISO 14001:2015 要求的环境管理体系，认证范围如下：

铝电解电容器的设计与制造。

The design and manufacture of aluminium electrolytic capacitors including.

由以下代表: Chris Cheung，亚太地区 合规风险主管

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ACCREDITED

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SK
-40 ~ +105℃
6,000 ~ 10,000 Hrs
Highest Ripple Current
Lower Impedance
Longest Life
SH
-40 ~ +105℃
5,000 ~ 6,000 Hrs
Highest Ripple Current
Lowest Impedance
Long Life
GK
-40 ~ +105℃
2,000 ~ 5,000 Hrs
Higher Ripple Current
Lower Impedance
GF
-40 ~ +105℃
1,000 ~ 4,000 Hrs
High Ripple Current
Low Impedance
SF
-40 ~ +105℃
3,000 ~ 6,000 Hrs
High Ripple Current
Long Life
Low Impedance
GT
-40 ~ +105℃
4,000 ~ 10,000 Hrs
High Ripple Current
Longer Life
Low Impedance
KF
-40 ~ +105℃
1,000 Hrs
5mmL
KS
-40 ~ +105℃
1,000 Hrs
7mmL
RF
-55 ~ +105℃
1,000 ~ 4,000 Hrs
Wide Temperature
High Ripple Current
Low Impedance
RS
-40 ~ +105℃
3,000 ~ 7,000 Hrs
High Ripple Current
Longer Life
Low Impedance
GY
-40 ~ +105℃
4,000 ~ 10,000 Hrs
Longer Life
Low Impedance
GS
-40(-25) ~ +85℃
2,000 Hrs
General
KM
-40(-25) ~ +105℃
2,000 Hrs
General
KG
-55 ~ +105℃
1,000 ~ 2,000 Hrs
Wide Temperature
RR
-40(-25) ~ +105℃
3,000 Hrs
Long Life
High Ripple Current
RT
-40(-25) ~ +105℃
5,000 Hrs
Long Life
High Ripple Current
RE
-25 ~ +105℃
8,000 ~ 10,000 Hrs
Longer Life
RD
-40(-25) ~ +105℃
8,000 ~ 10,000 Hrs
Longer Life
High Ripple Current
RH
-40(-25) ~ +105℃
10,000 ~ 12,000 Hrs
Longest Life
High Ripple Current
NP
-40 ~ +85℃
1,000 Hrs
Non-polar
NH
-40 ~ +105℃
1,000 Hrs
Non-polar
KM
-25 ~ +105℃
2,000 Hrs
Pen Cap
RW
-25 ~ +105℃
5,000 Hrs
Long Life
Pen Cap
RY
-25 ~ +105℃
10,000 Hrs
Longer Life
Pen Cap
FA
-40 ~ +85℃
1,000 Hrs
For Audio Standard
OM
-25 ~ +105℃
2,000 Hrs
Withstanding Overvoltage
BD
-40 ~ +125℃
1,000 ~ 2,000 Hrs
High Temperature
RA
-40(-25) ~ +130℃
1,000 ~ 4,000 Hrs
High Temperature
High Ripple Current
RB
-40(-25) ~ +130℃
3,000 ~ 4,000 Hrs
High Temperature
High Ripple Current
Long Life
RC
-25 ~ +130℃
5,000 ~ 6,000 Hrs
High Temperature
High Ripple Current
Longer Life

LP
-40(-25) ~ +85℃
2,000 Hrs
Standard

HP
-40(-25) ~ +105℃
2,000 Hrs
Wide Temperature

GP
-40(-25) ~ +105℃
2,000 Hrs
Ultra Small Size

TP
-25 ~ +85℃
10,000 Hrs
Ultra Long Life

KP
-40(-25) ~ +105℃
3,000 Hrs
Long Life

EP
-40(-25) ~ +105℃
5,000 Hrs
Long Life

SP
-40(-25) ~ +105℃
7,000 Hrs
Longer Life

QP
-40(-25) ~ +85℃
2,000 Hrs
Withstanding Vibration

VP
-40(-25) ~ +105℃
2,000 Hrs
Withstanding Vibration

AP
-40 ~ +85℃
1,000 Hrs
For Audio

UP
-25 ~ +105℃
2,000 Hrs
Withstanding Overvoltage

DP
-40(-25) ~ +85℃
5,000 Hrs
Long Life
Low Impedance

FP
-40(-25) ~ +105℃
5,000 Hrs
Long Life
Low Impedance

WR
-40(-25) ~ +85℃
2,000 Hrs
Standard

WI
-25 ~ +85℃
2,000 Hrs
High Ripple Current

WT
-40(-25) ~ +105℃
2,000 Hrs
Standard

WX
-40(-25) ~ +85℃
5,000 Hrs
Longer Life

WH
-25 ~ +85℃
10,000 Hrs
Longer Life

WL
-25 ~ +85℃
20,000 Hrs
Ultra Long Life

WF
-40(-25) ~ +105℃
5,000 Hrs
Long Life

WB
-25 ~ +125℃
3,000 Hrs
High Temperature

VS1
-40 ~ +85℃
2,000 Hrs
General
Φ4 ~ Φ10

VT1
-55 ~ +105℃
1,000 Hrs
General
Φ4 ~ Φ6.3

VTD
-55 ~ +105℃
2,000 Hrs
Low Impedance
Φ6.3 ~ Φ10

VZ2
-55 ~ +105℃
2,000 Hrs
Low Impedance
Φ4 ~ Φ10

VTG
-25 ~ +105℃
3,000 Hrs
High Voltage
Φ8 ~ Φ10

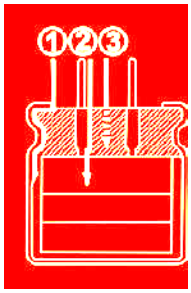
VTL
-40 ~ +105℃
3,000 ~ 5,000 Hrs
Long Life
Φ4 ~ Φ10

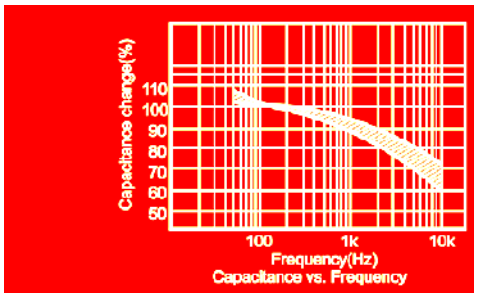
Series	Features (特點)	Letter Color	Sleeve Color	Temp. (°C)	Voltage (VDC)	Cap. (μF)	Load Life	Page
Miniature Type								小型品
General Purpose								普通品
Low Impedance Type								低阻抗品
High Reliability Type								高可靠品
High Temperature Type								高溫度品
For Audio Type								音響用品
Non-polarized Type								無極性品
Pen Cap Type								筆型電容
Standard Type								標準品

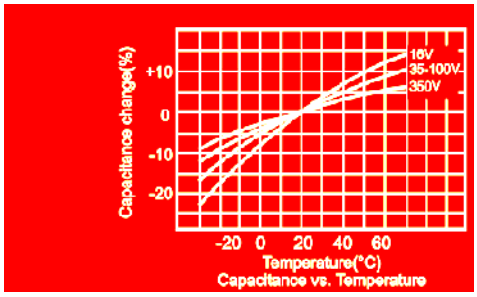
Series	Features (特點)	Letter Color	Sleeve Color	Temp. (°C)	Voltage (VDC)	Cap. (μF)	Load Life	Page
High Reliability Type								高可靠品
Screw Terminal Type								螺釘型
Surface Mount Type								貼片品

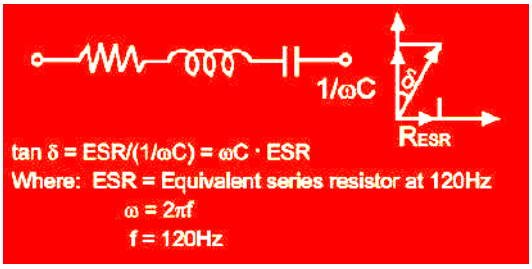
Case Diameter	Gap Required
Φ6.3~16	2mm or more
Φ18~35	3mm or more
Φ40 or more	5mm or more

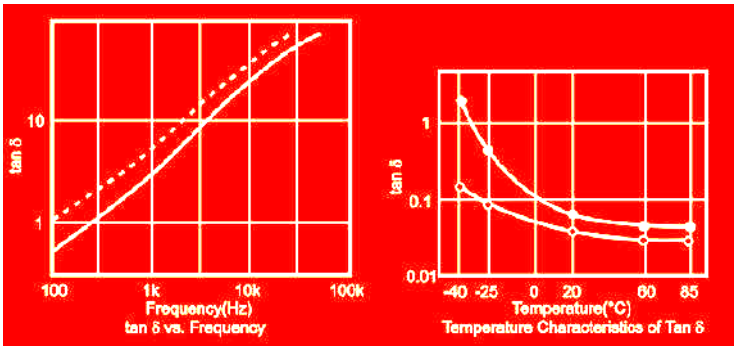
Chemical Name	Structural Formula	Representative Brand Name
Trichlorotrifluoroethane	$C_2Cl_3F_3$	Freon TF, Daiflon S-3
Fluorotrichloromethane	CCl_3F	Freon-11, Daiflon S-1
Trichloroethane	$C_2H_3Cl_3$	Chloroethene
Trichloroethylene	C_2HCl_3	Trichlene
Methyl Chloride	CH_3Cl	MC



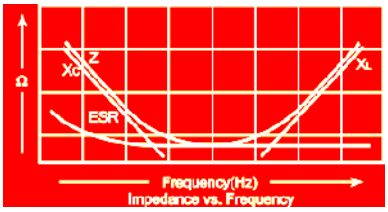

Capacitance change(%)
110
100
90
80
70
60
50
100
1k
10k
Frequency(Hz)
Capacitance vs. Frequency


Capacitance change(%)
+10
0
-10
-20
16V
35-100V
350V
-20 0 20 40 60
Temperature(°C)
Capacitance vs. Temperature

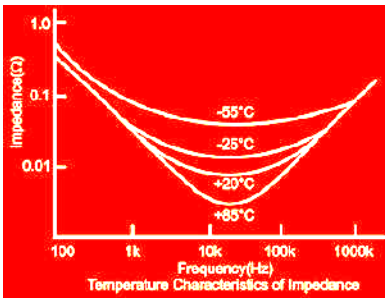

1/ωC
δ
RESR
tan δ = ESR/(1/ωC) = ωC · ESR
Where: ESR = Equivalent series resistor at 120Hz
ω = 2πf
f = 120Hz


tan δ
10
1
100
1k
10k
100k
Frequency(Hz)
tan δ vs. Frequency
tan δ
1
0.1
0.01
-40 -25 0 20 60 85
Temperature(°C)
Temperature Characteristics of Tan δ

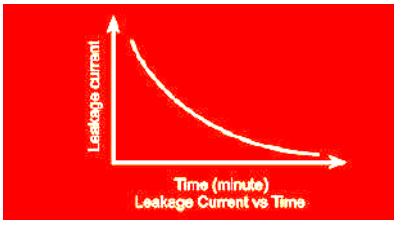
$$Z = \sqrt{ESR^2 + (XL - XC)^2}$$
Where: $Xc = 1/\omega C = 1/2\pi fC$
$XL = \omega L = 2\pi fL$



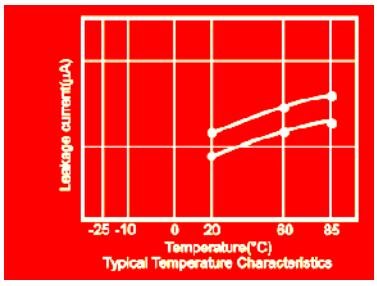
Impedance vs. Frequency



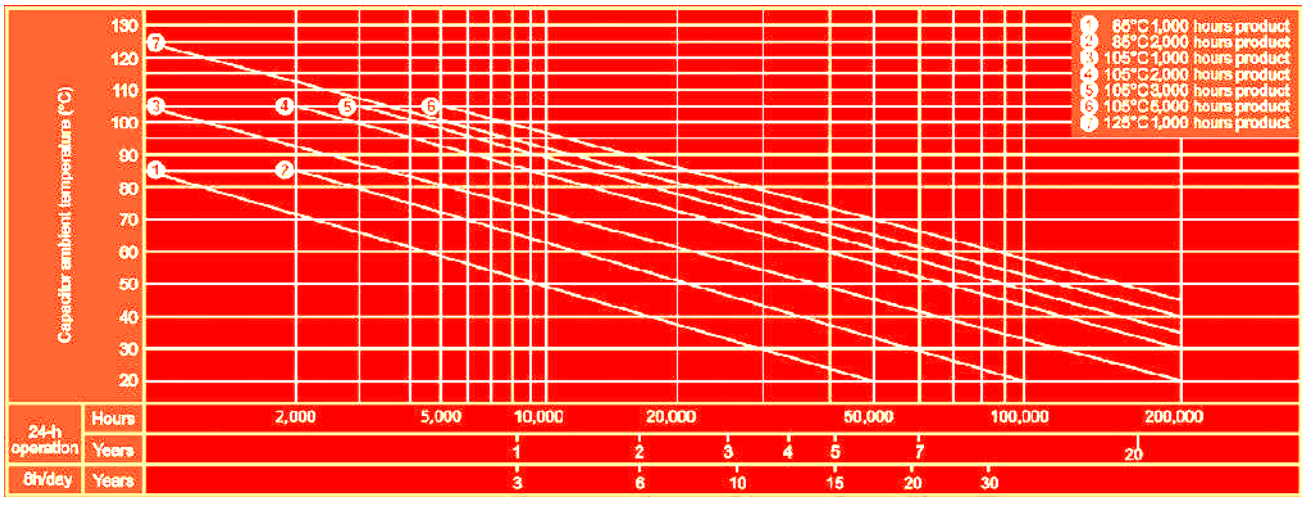
Temperature Characteristics of Impedance



Leakage Current vs Time



Typical Temperature Characteristics



Etching and forming of aluminum foil
Automatic monitoring of etching and forming process
Inspection of etching and forming electrolytes, electrolyte monitoring
Foil sampling, testing of mechanical and electrical characteristics
Checking the plotter diagrams of the etching and forming process
Classification and sorting of anode groups
Foil cutting and delivery
Inspection and approval by quality control team
Winding
Checking that the winding data are adhered to, inspection of terminals
Impregnation and forming
Checking of equipment and settings, electrolyte monitoring
Riveting, welding, assembly
Sampling of assembly, riveting and weld quality (SPC)
Seal curling, washing, marking, insulating and aging
Sampling to test seals and finish
100% final inspection of electrical parameters
Checking automatic test equipment and relevant settings
Visual inspection and packing
Inspection of packing (markings, contents, date code)
Conformance inspection
Tests of mechanical and electrical characteristics, packing
Stock
Approval by quality control team
Dispatch
Identity check

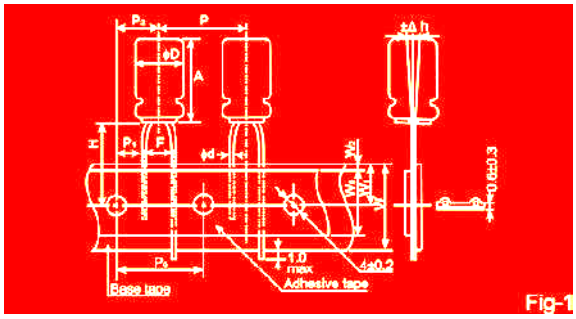


Fig-1

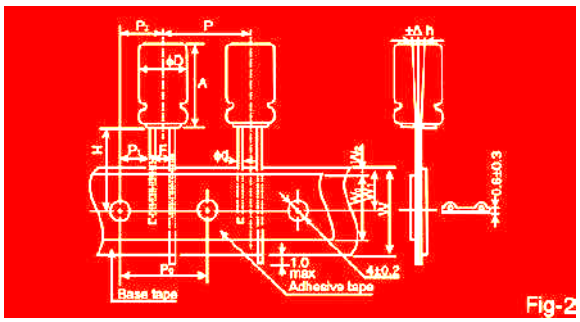


Fig-2

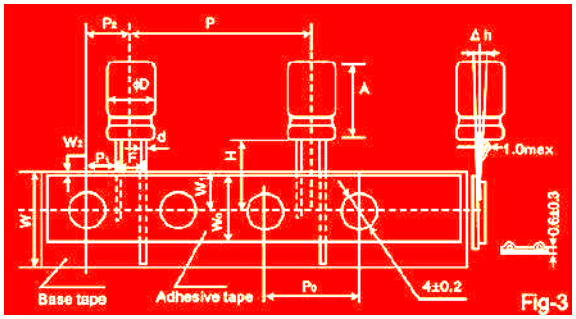


Fig-3

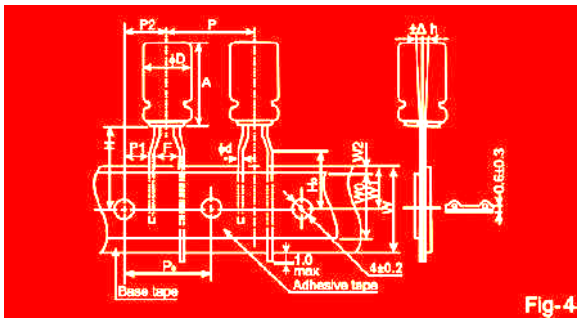
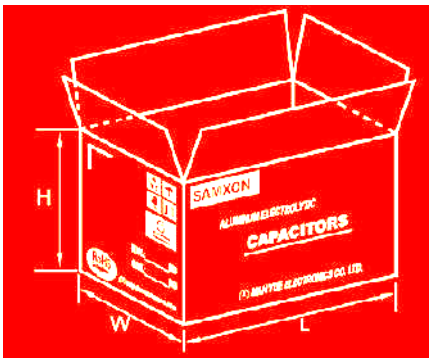


Fig-4



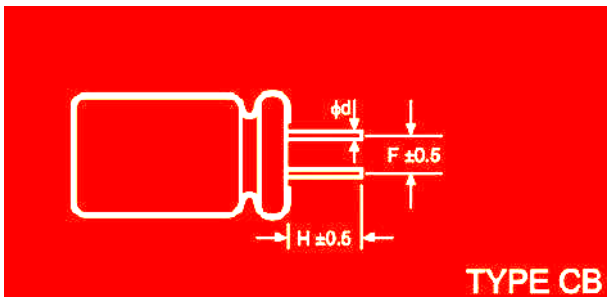
ΦD x L (mm)	L (mm)	W (mm)	H (mm)	Inner Box Quantity	Outer Box Quantity

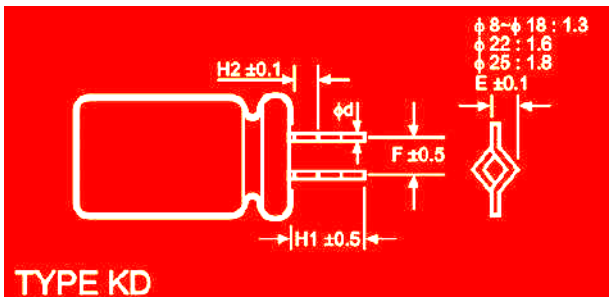
Long Lead Wire Product

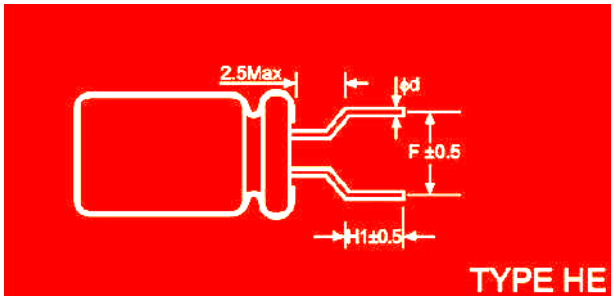
ΦD x L (mm)	Plastic Bag Quantity	Inner Box Quantity	Outer Box Quantity

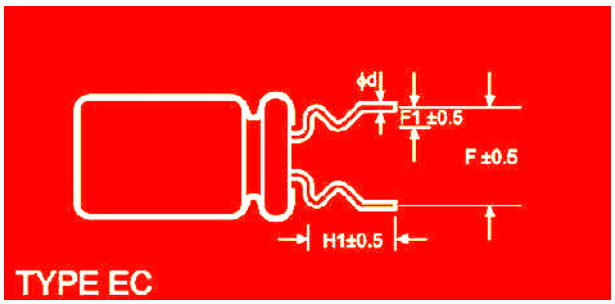
Snap-in Terminal Product

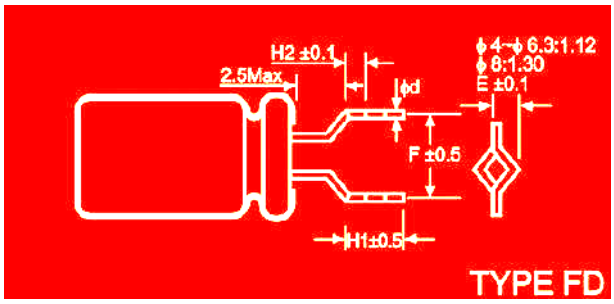
ΦD x L (mm)	Inner Box Quantity	Outer Box Quantity	ΦD x L (mm)	Inner Box Quantity	Outer Box Quantity

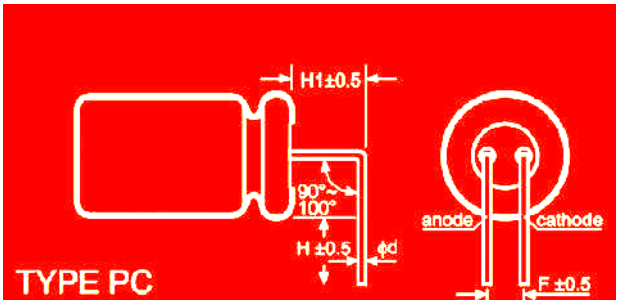










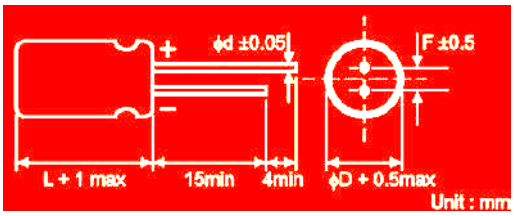


SHAPE CODE	ΦD	4	5	6.3	8 (L >5mm)	10	13	16	18

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	KF	336	M	1C	E	05	RR

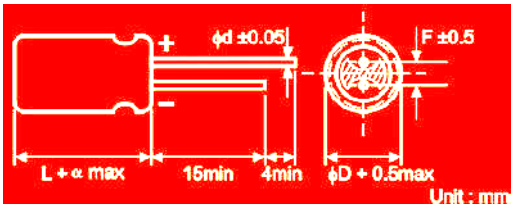
Voltage (Code)		4V (0G)		6.3V (0J)		10V (1A)		16V (1C)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		25V (1E)		35V (1V)		50V (1H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

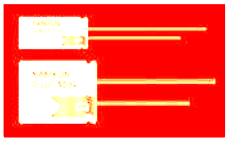
Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	KS	476	M	0J	D	07	RR

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current



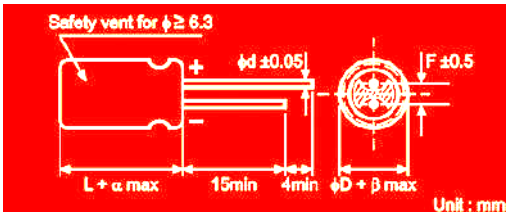
Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C

Working Voltage (V)
Z-25°C / Z+20°C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	GS	477	M	1C	F	12	RR

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

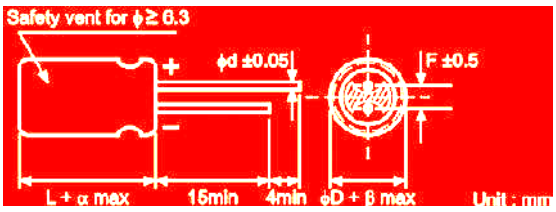
Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)
Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C
Working Voltage (V)
Z-25˚C / Z+20˚C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	KM	337	M	1E	F	12	RR

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		160V (2C)		200V (2D)		220V (2N)		250V (2E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

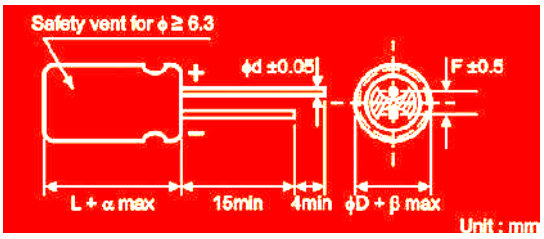
Voltage (Code)		350V (2V)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		500V (2H)		550V (2S)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C

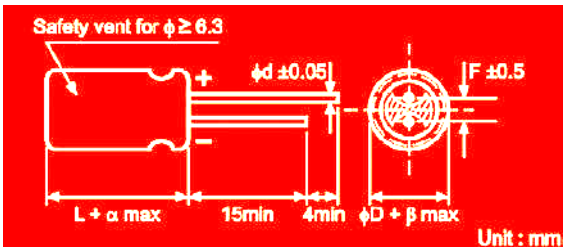


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	KG	477	M	1C	F	12	RR

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

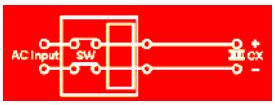
Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Rated Voltage (V) Z-25˚C / Z+20˚C	



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	OM	107	M	2D	K	25	RR

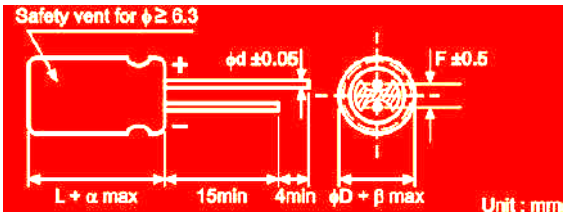
Voltage (Code)		200V (2D)		400V (2G)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current



Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	GF	108	M	0J	G	1B	RR

Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (µF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

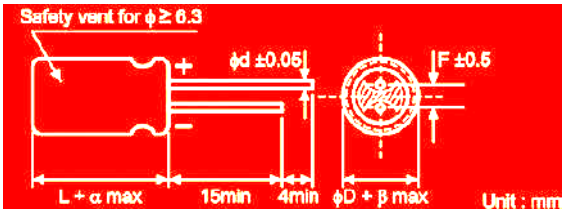
Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		63V (1J)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C



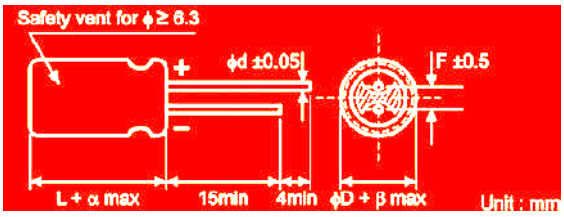
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	SF	158	M	1A	G	20	RR

Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		63V (1J)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Item	Performance Characteristics
	Working Voltage (V)
	tan δ (max.)
	Rated Voltage (V)
	Z-25°C / Z+20°C
	Z-40°C / Z+20°C

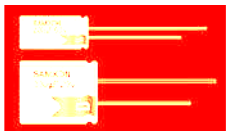


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	GT	338	M	1A	I	25	RR

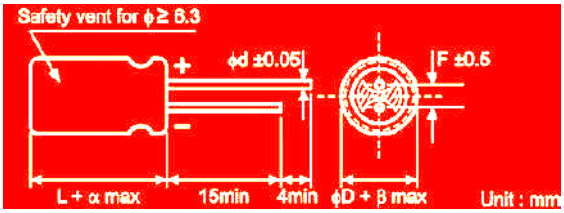
Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		63V (1J)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current



Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Working Voltage (V) Z-25˚C / Z+20˚C	



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	GK	227	M	1E	F	12	RR

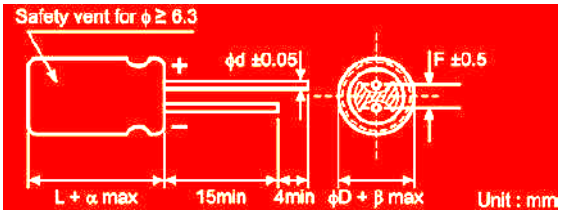
Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		25V (1E)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C



1	2,3	4,5,6	7	8,9	10	11,12	13,14
E	SH	108	M	1C	G	16	RR

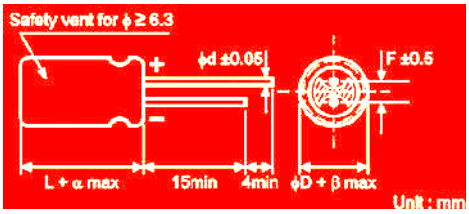
Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	SK	108	M	1C	G	16	RR

Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

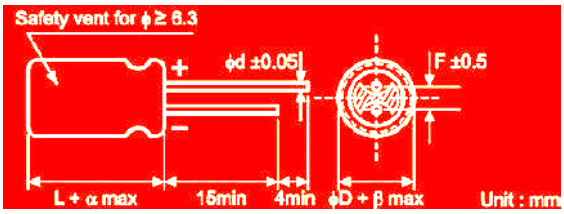
Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		63V (1J)			80V (1K)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C



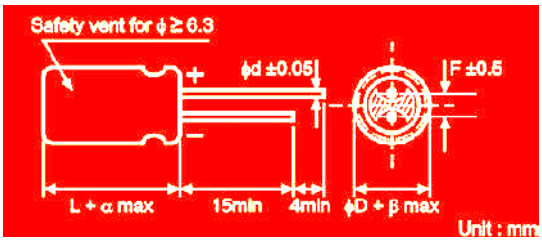
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RS	228	M	1V	K	30	RR

Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (µF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		63V (1J)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Rated Voltage (V) Z-25˚C / Z+20˚C Z-40˚C / Z+20˚C	



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	GY	108	M	1A	G	16	RR

Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (µF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

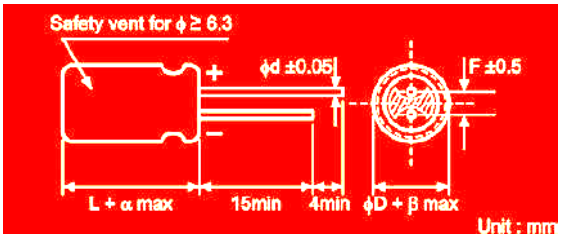
Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (µF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		63V (1J)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

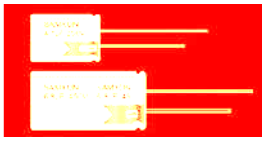


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RF	337	M	1C	F	12	RR

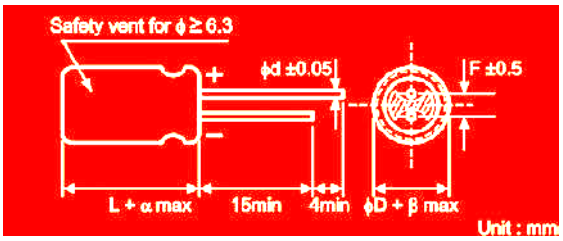
Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (µF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		63V (1J)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current



Item	Performance Characteristics
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) Surge Voltage (V)
	Working Voltage (V) Z-25˚C / Z+20˚C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RR	227	M	2D	L	30	RR

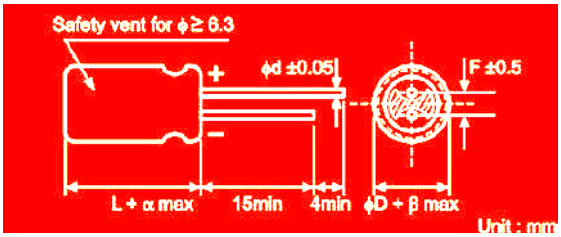
Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		450V (2W)		500V (2H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

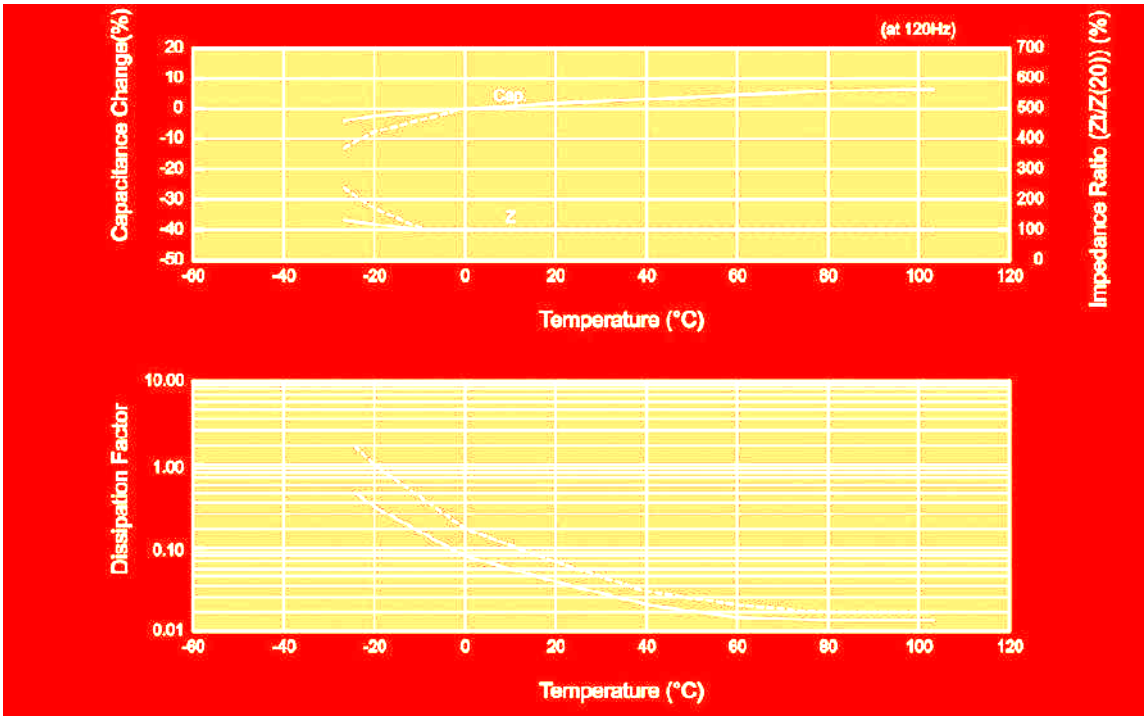
Working Voltage (V)
Z-25°C / Z+20°C

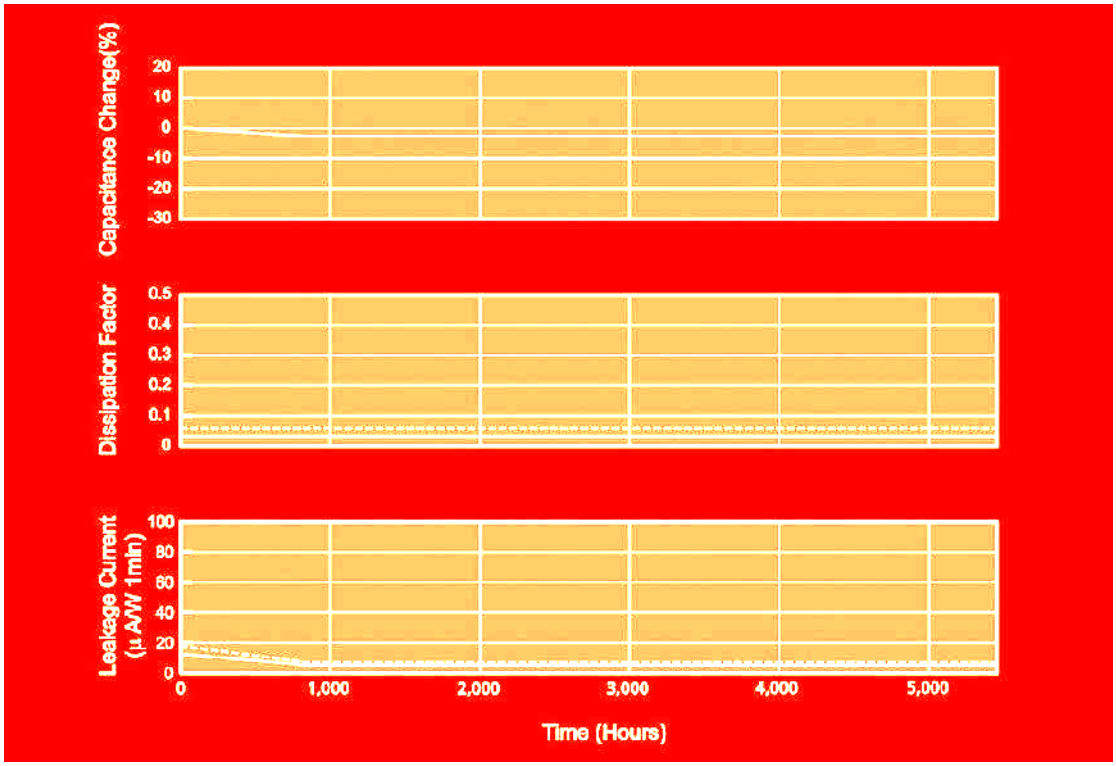


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RT	226	M	2E	G	20	RR

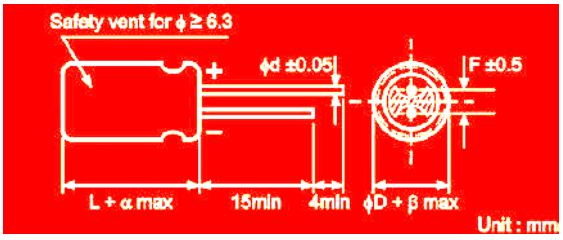
Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		450V (2W)		500V (2H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current


(at 120Hz)
Capacitance Change(%)
Impedance Ratio (Z/Z(20)) (%)
Cap
Z
Temperature (°C)
Dissipation Factor
Temperature (°C)


Capacitance Change(%)
Dissipation Factor
Leakage Current (μA/W 1min)
Time (Hours)

Item	Performance Characteristics
Working Voltage (V)	
tan δ (max.)	
Rated Voltage (V)	
Z-25°C / Z+20°C	

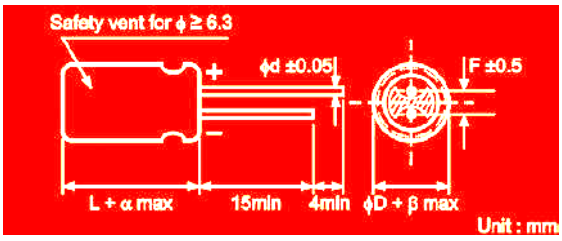


1	2,3	4,5,6	7	8,9	10	11,12	13,14
E	RE	227	M	2D	L	30	RR

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
Working Voltage (V)	
tan δ (max.)	
Rated Voltage (V)	
Z-25°C / Z+20°C	

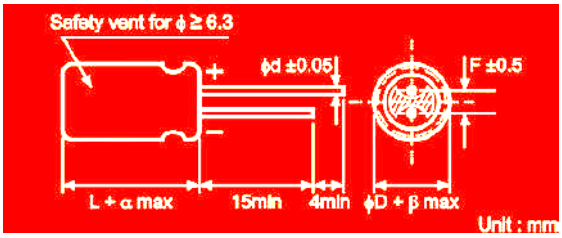


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RD	336	M	2V	K	20	RR

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		450V (2W)		500V (2H)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

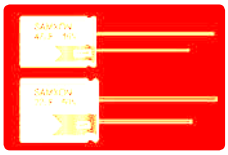
Item	Performance Characteristics
Working Voltage (V)	
tan δ (max.)	
Rated Voltage (V)	
Z-25°C / Z+20°C	



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	R H	226	M	2C	G	20	RR

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

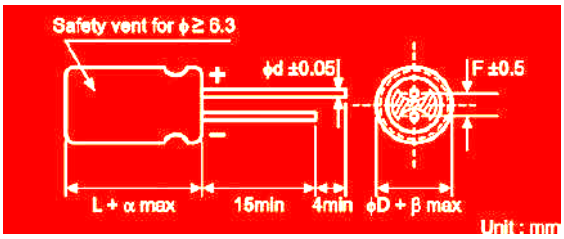
Voltage (Code)		400V (2G)		450V (2W)		500V (2H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current



Item	Performance Characteristics

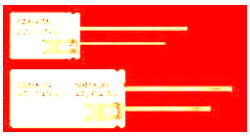
Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	BD	337	M	1C	F	12	RR

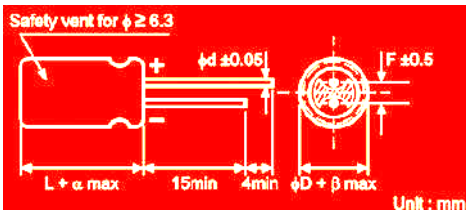
Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1E)		50V (1H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current



Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RA	108	M	1C	G	20	RR

Voltage (Code)		10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

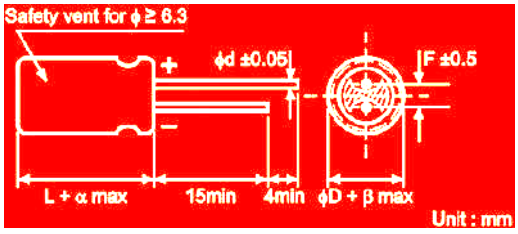
Voltage (Code)		25V (1E)			35V (1V)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		50V (1H)			63V (1J)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		200V (2D)		250V (2E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		350V (2V)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Rated Voltage (V) Z-25˚C / Z+20˚C	

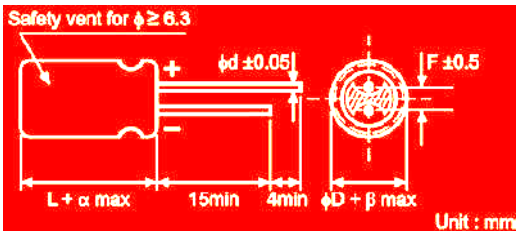


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RB	107	M	2D	K	35	RR

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Rated Voltage (V) Z-25˚C / Z+20˚C	



1	2,3	4,5,6	7	8,9	10	11,12	13,14
E	RC	106	M	2E	G	16	RR

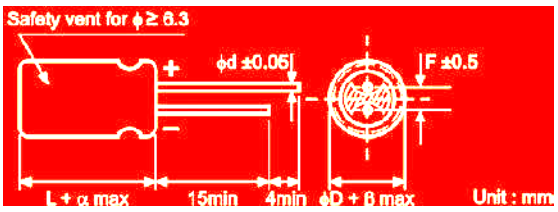
Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

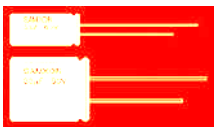
Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	FA	227	M	1E	G	16	RR

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

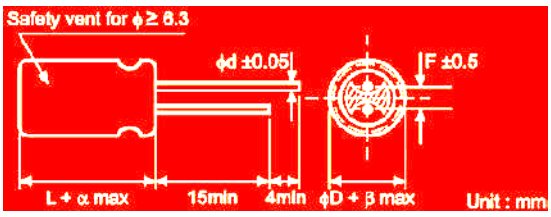
Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current



Item	Performance Characteristics

Working Voltage (V)
Tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C



1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	NP	107	M	1C	F	12	RR

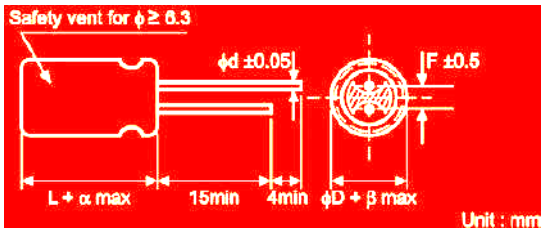
Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

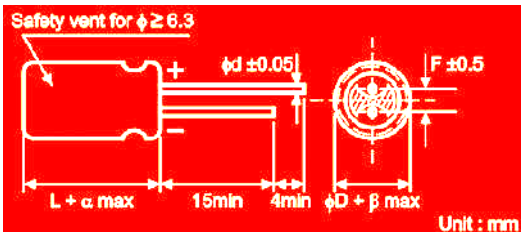


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	NH	476	M	1A	E	11	RR

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
Working Voltage (V)	
tan δ (max.)	
Rated Voltage (V)	
Z-25˚C / Z+20˚C	

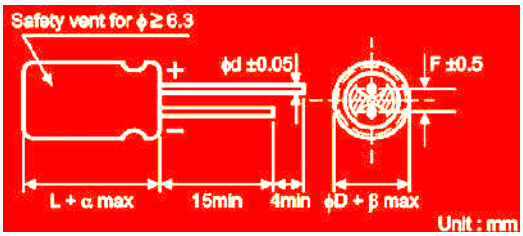


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	KM	227	M	2D	I	50	RR

Voltage (Code)		200V (2D)		220V (2N)		250V (2E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Rated Voltage (V) Z-25˚C / Z+20˚C	

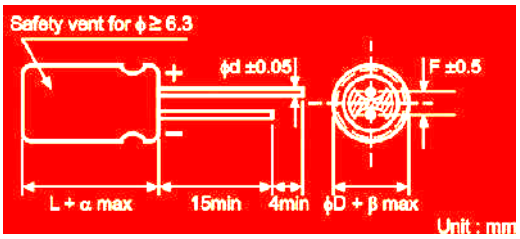


1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RW	157	M	2E	I	50	RR

Voltage (Code)		200V (2D)		220V (2N)		250V (2E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Rated Voltage (V) Z-25˚C / Z+20˚C	

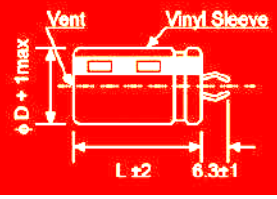


1	2,3	4,5,6	7	8,9	10	11,12	13,14
E	RY	157	M	2E	I	50	RR

Voltage (Code)		200V (2D)		220V (2N)		250V (2E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

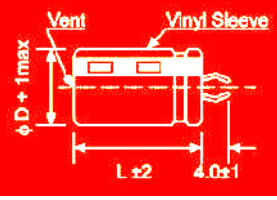
SW-Type



PC Board Mounting Holes

Unit : mm

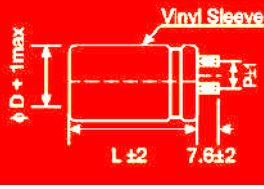
SZ-Type



PC Board Mounting Holes

Unit : mm

SG-Type

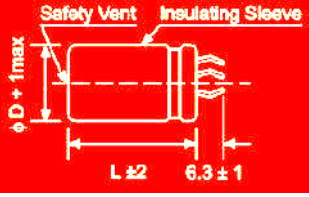


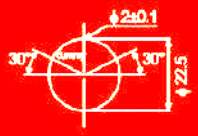
ϕD	35	40	50	63	76
P	14	14	18	25	25

PC Board Mounting Holes

Unit : mm

SX-Type

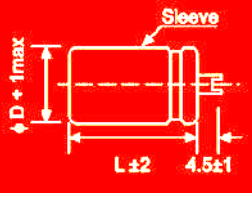




PC Board Mounting Holes

Unit : mm

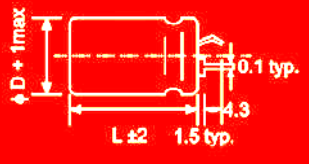
LD-Type

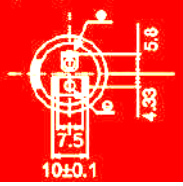


PC Board Mounting Holes

Unit : mm

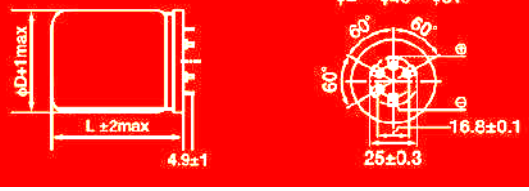
ST-Type





Unit : mm

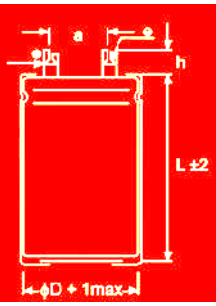
FE-Type



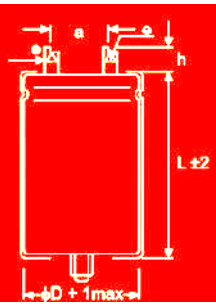
ϕD = ϕ40 ~ ϕ51

Unit : mm

VO-Type



VO-Type
成品带螺柱



Item	Performance Characteristics
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) Z-25°C / Z+20°C Z-40°C / Z+20°C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	LP	337	M	2E	N	30	SW

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		160V (2C)		180V (2P)		200V (2D)		220V (2N)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		250V (2E)		315V (2F)		350V (2V)		385V (2Y)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)		500V (2H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		550V (2S)		600V (2G)		650V (F5)		700V (2S)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	AP	478	M	1C	N	25	SW

Voltage (Code)		16V (1C)		25V (1E)		35V (1V)		63V (1J)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		80V (1K)		100V (2A)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) Z-25˚C / Z+20˚C Z-40˚C / Z+20˚C

1	2,3	4,5,6	7	8,9	10	11,12	13,14
E	QP	108	M	2C	O	40	SW

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		160V (2C)		180V (2P)		200V (2D)		220V (2N)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		250V (2E)		315V (2F)		350V (2V)		385V (2Y)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)		500V (2H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	DP	337	M	2G	P	45	SW

Voltage (Code)		160V (2C)			200V (2D)			250V (2E)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		385V (2Y)			400V (2G)			420V (2M)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		450V (2W)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current

Voltage (Code)		500V (2H)		550V (25)		600V (26)		650V (F5)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) Z-25˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	TP	477	M	2D	O	30	SW

Voltage (Code)		200V (2D)		250V (2E)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)
Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C
Working Voltage (V)
Z-25°C / Z+20°C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	HP	227	M	2V	O	35	SW

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		160V (2C)		180V (2P)		200V (2D)		220V (2N)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		250V (2E)		315V (2F)		350V (2V)		385V (2Y)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		500V (2H)		550V (25)		600V (26)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

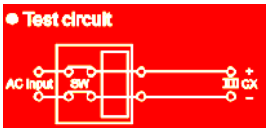
Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Rated Voltage (V) Z-25˚C / Z+20˚C	

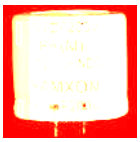
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	UP	227	M	2D	N	25	SW

Voltage (Code)		200V (2D)		250V (2E)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Rated voltage	Normal Capacitance	Current Limit	Test Voltage

● Test circuit





Item	Performance Characteristics
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) tan δ (max.)
	Working Voltage (V) Z-25˚C / Z+20˚C Z-40˚C / Z+20˚C
	Working Voltage (V) Z-25˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	KP	107	M	2G	O	25	S W

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		160V (2C)		180V (2P)		200V (2D)		220V (2N)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		250V (2E)		315V (2F)		350V (2V)		385V (2Y)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		500V (2H)		550V (25)		600V (26)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
	Working Voltage (V) tan δ (max.) Working Voltage (V) tan δ (max.)
	Working Voltage (V) Z-25˚C / Z+20˚C Z-40˚C / Z+20˚C Working Voltage (V) Z-25˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	EP	228	M	2C	Q	45	SW

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		315V (2F)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		350V (2V)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		500V (2H)		550V (25)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C

Working Voltage (V)
Z-25°C / Z+20°C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	FP	337	M	2 E	P	3 0	S W

Voltage (Code)		10V (1A)			16V (1C)			25V (1E)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		35V (1V)			50V (1H)			63V (1J)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		80V (1K)			100V (2A)			200V (2D)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Voltage (Code)		250V (2E)			400V (2G)			450V (2W)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	SP	107	M	2G	O	30	SW

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		315V (2F)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		350V (2V)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics
	Working Voltage (V) tan δ (max.) Working Voltage (V) tan δ (max.)
	Working Voltage (V) Z-25˚C / Z+20˚C Z-40˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	VP	477	M	2 D	O	3 0	S W

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		160V (2C)		180V (2P)		220V (2D)		220V (2N)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		250V (2E)		315V (2F)		350V (2V)		385V (2Y)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		400V (2G)		420V (2M)		450V (2W)		500V (2H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tan δ (max.)

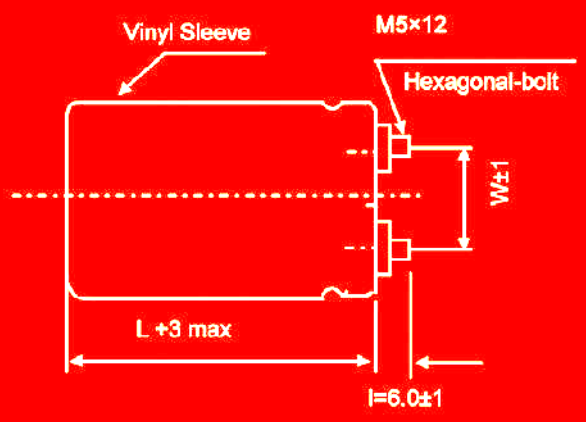
Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	GP	567	M	2 E	O	3 5	S W

Voltage (Code)		160V (2C)		180V (2P)		200V (2D)		220V (2N)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		250V (2E)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

O-Type

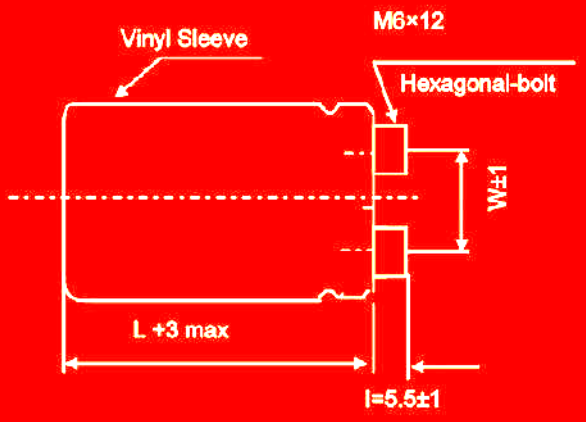


Φ35~90

Screw Terminal

Unit : mm

D-Type



Φ76~90

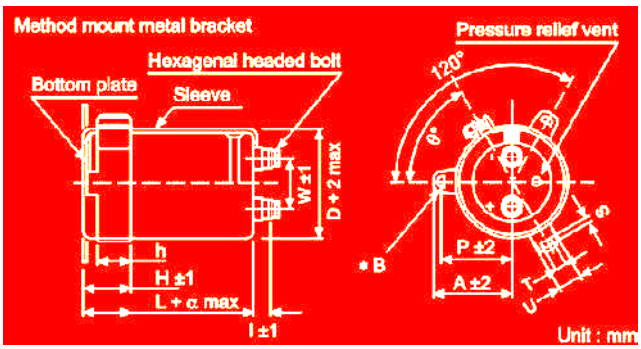
Screw Terminal

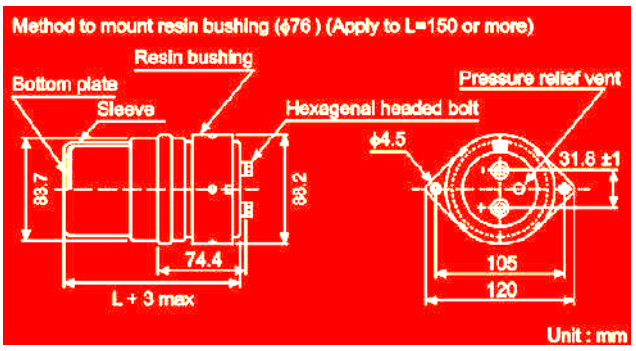
Unit : mm

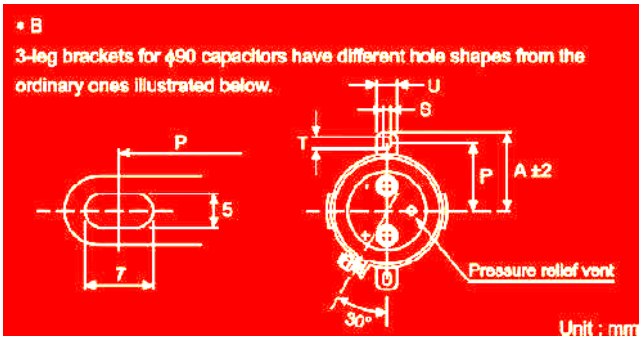
Item	Performance Characteristics

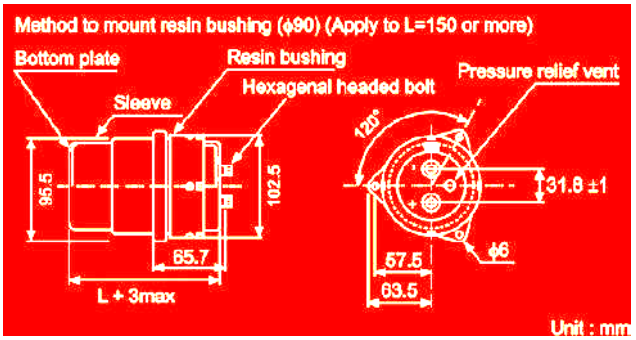
Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

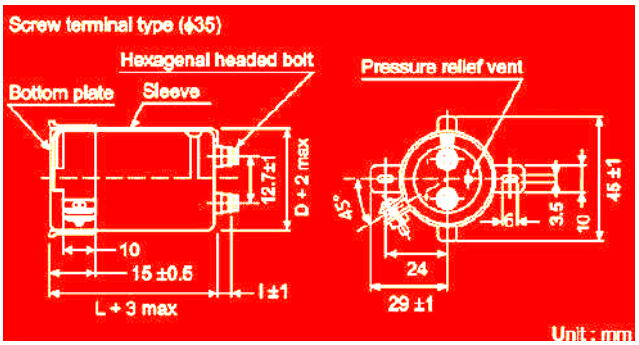
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	WR	688	M	2C	S	1L	OO











Voltage (Code)		3 - Leg				2 - Leg				
Symbol	ΦD	51	63.5	76	90	35	51	63.5	76	90

Voltage (Code)		10V (1A)			16V (1C)			25V (1E)		
SV		13			20			32		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		35V (1V)			50V (1H)			63V (1J)		
SV		44			63			79		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		80V (1K)			100V (2A)			160V (2C)		
SV		100			125			200		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

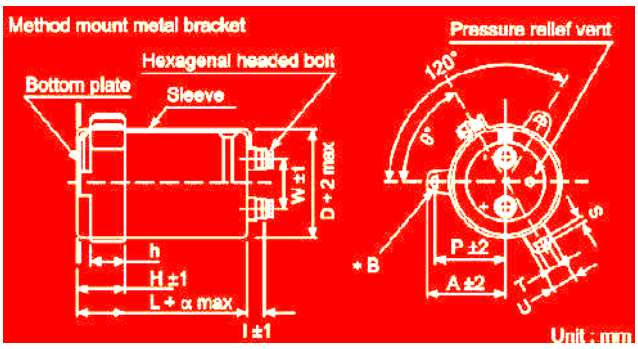
Voltage (Code)		200V (2D)			250V (2E)			350V (2V)		
SV		250			300			400		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

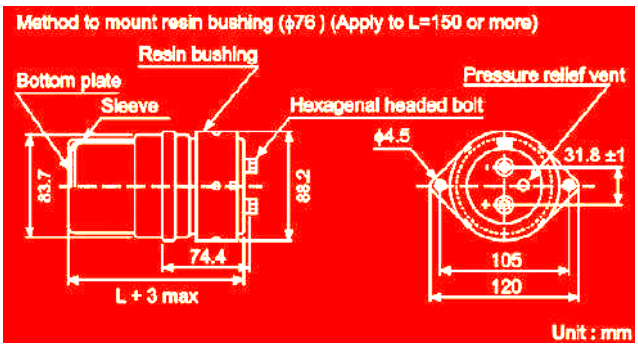
Voltage (Code)		400V (2G)			450V (2W)			500V (2H)		
SV		450			500			550		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

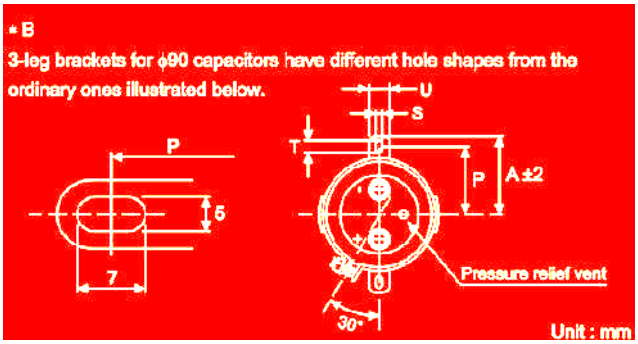
Voltage (Code)		550V (2S)			600V (2J)			630V (2J)		
SV		600			650			680		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

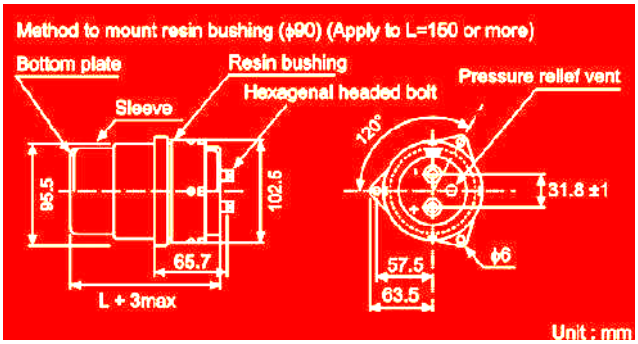
Item	Performance Characteristics
Working Voltage (V)	
Z-25°C / Z+20°C	

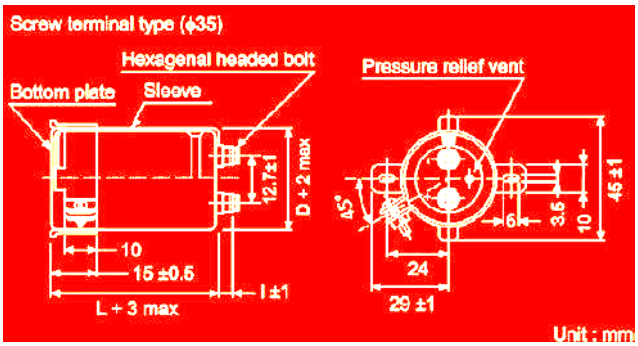
1	2,3	4,5,6	7	8,9	10	11,12	13,14
E	WI	228	M	2V	S	95	O5











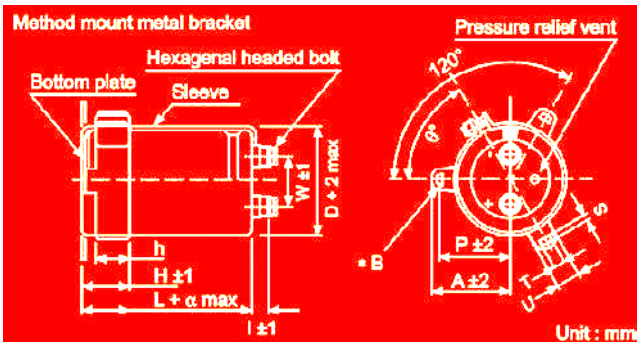
Voltage (Code)		3-Leg				2-Leg				
Symbol	ΦD	51	63.5	76	90	35	51	63.5	76	90

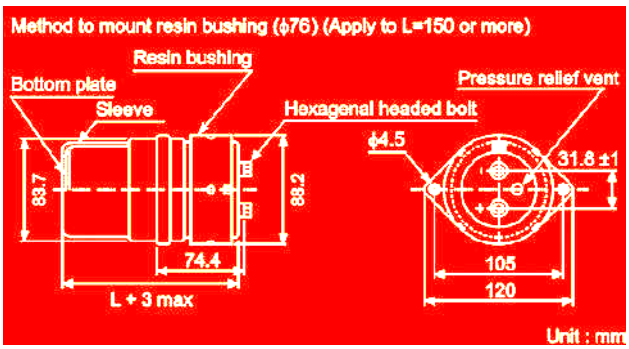
Voltage (Code)		350V (2V)		400V (2G)		450V (2W)	
SV		400		450		500	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

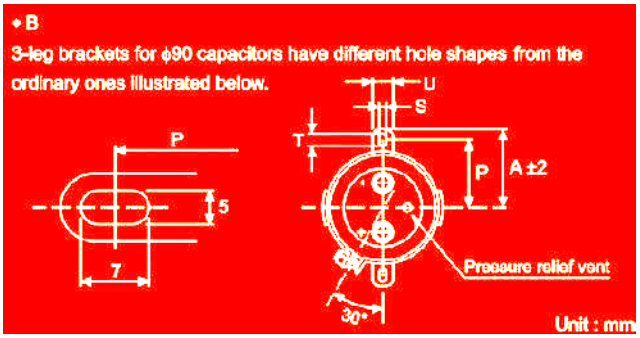
Item	Performance Characteristics

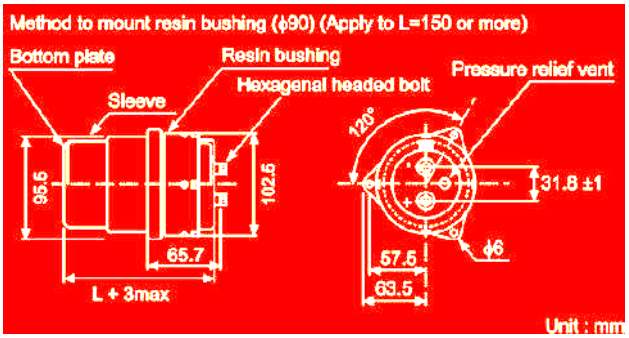
Working Voltage (V)
Z-25℃ / Z+20℃
Z-40℃ / Z+20℃

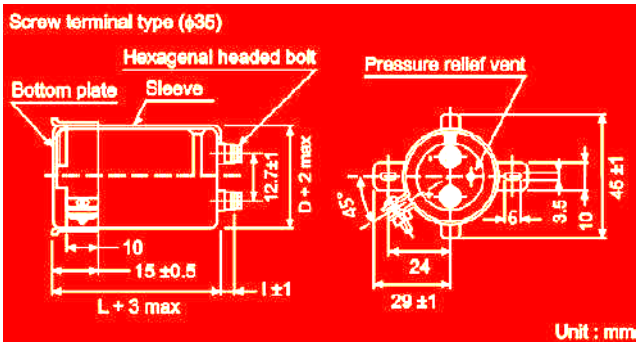
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	WT	278	M	2V	T	1L	OO











Voltage (Code)		3 - Leg				2 - Leg				
Symbol	ΦD	51	63.5	76	90	35	51	63.5	76	90

Voltage (Code)		10V (1A)			16V (1C)			25V (1E)		
SV		13			20			32		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		35V (1V)			50V (1H)			63V (1J)		
SV		44			63			79		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		80V (1K)			100V (2A)			160V (2C)		
SV		100			125			200		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		200V (2D)			250V (2E)			315V (2F)		
SV		250			300			365		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		350V (2V)			400V (2G)			450V (2W)		
SV		400			450			500		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		500V (2H)		
SV		550		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current

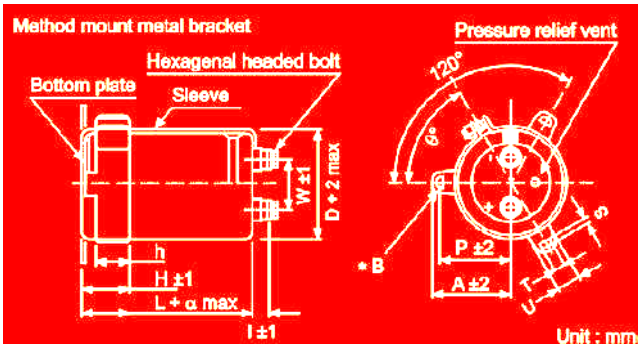
Item	Performance Characteristics

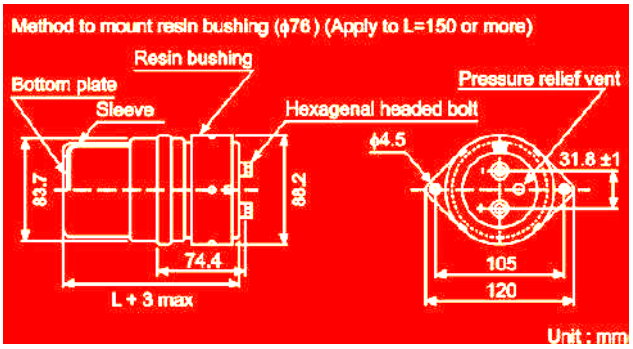
ΦD	L \ V	10	16	25	35	50	63	80	100

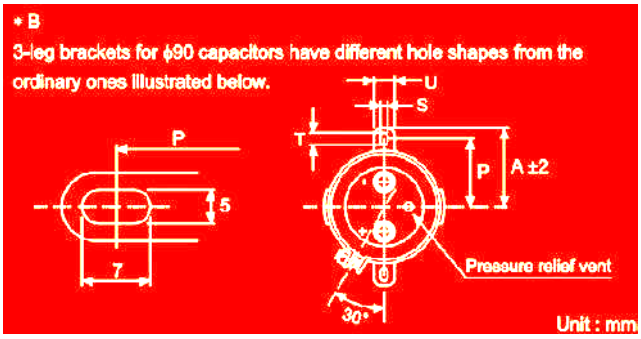
ΦD	L \ V	160~250	350~450

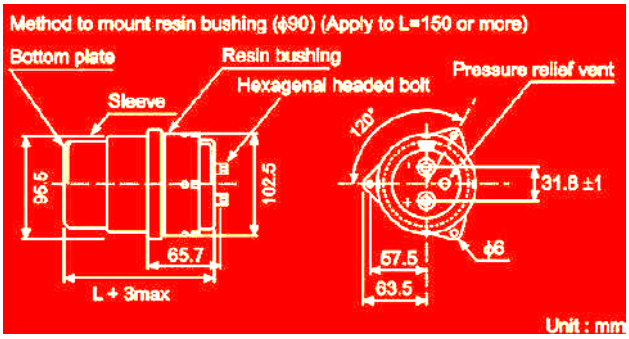
Working Voltage (V)
Z-25℃ / Z+20℃
Z-40℃ / Z+20℃

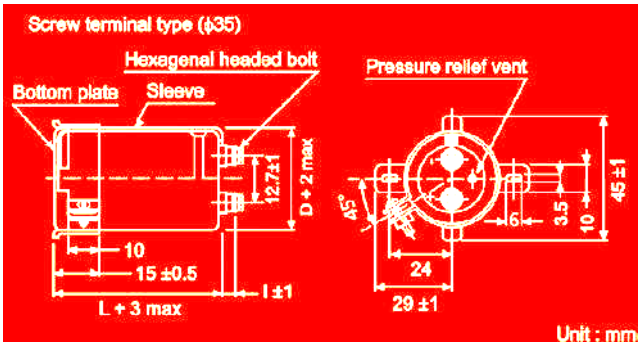
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	WX	228	M	2G	S	1M	OO











Voltage (Code)		3 - Leg				2 - Leg				
Symbol	ΦD	51	63.5	76	90	35	51	63.5	76	90

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
SV		13		20		32		44	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)	
SV		63		79		100		125	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

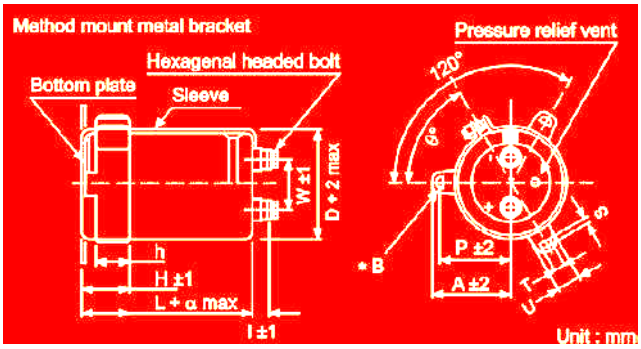
Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
SV		200		250		300		400	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

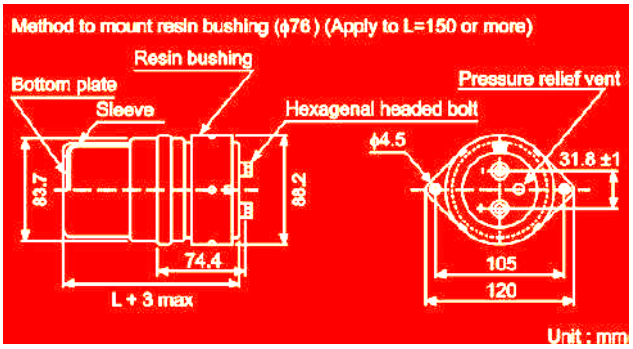
Voltage (Code)		400V (2G)		450V (2W)		500V (2H)		550V (2J)	
SV		450		500		550		600	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

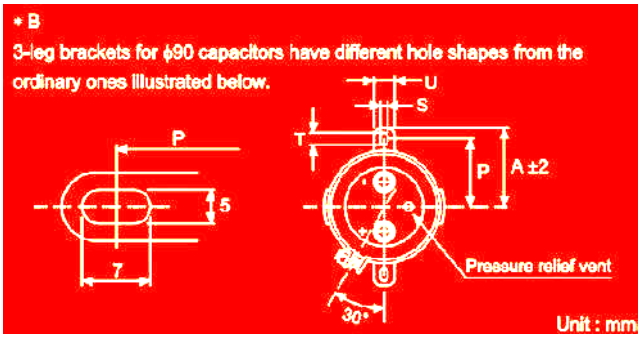
Item	Performance Characteristics

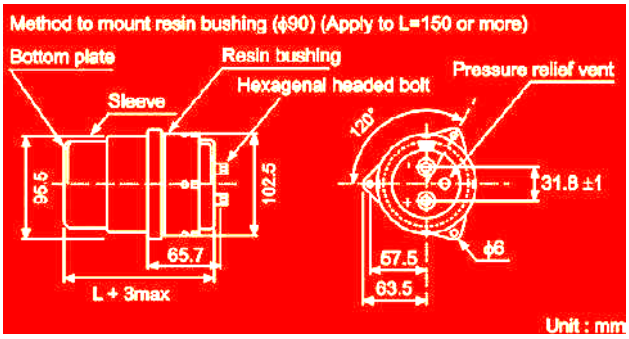
Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C

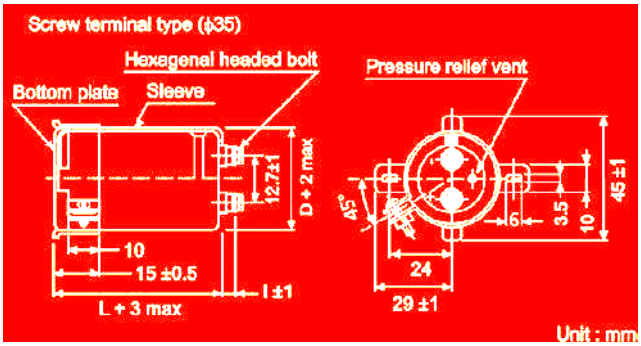
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	WF	688	M	2V	U	1P	OO











Voltage (Code)		3 - Leg				2 - Leg				
Symbol	ΦD	51	63.5	76	90	35	51	63.5	76	90

Voltage (Code)		10V (1A)			16V (1C)			25V (1E)		
SV		13			20			32		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		35V (1V)			50V (1H)			63V (1J)		
SV		44			63			79		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

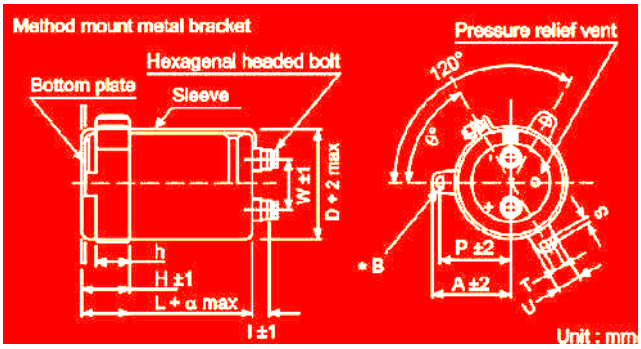
Voltage (Code)		80V (1K)			100V (2A)			160V (2C)		
SV		100			125			200		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

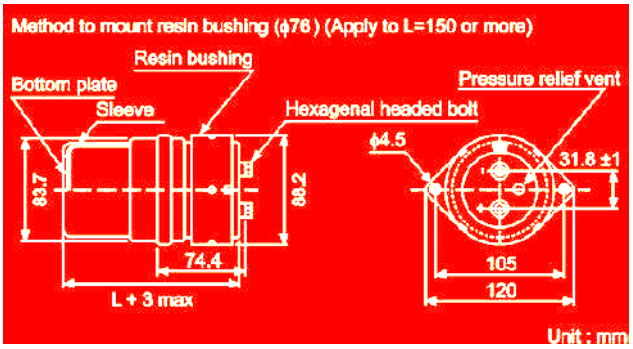
Voltage (Code)		200V (2G)			250V (2W)			350V (2H)		
SV		250			300			400		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

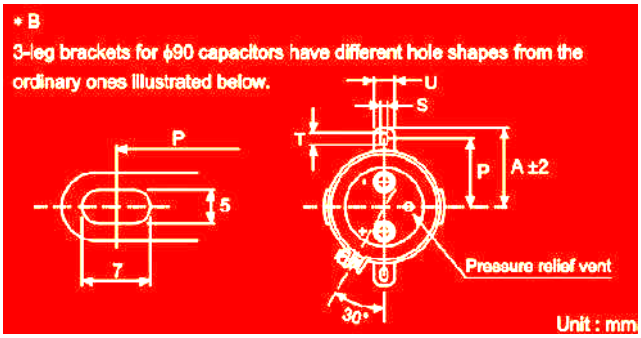
Voltage (Code)		400 (2G)			450V (2W)			500V (2H)		
SV		450			500			550		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

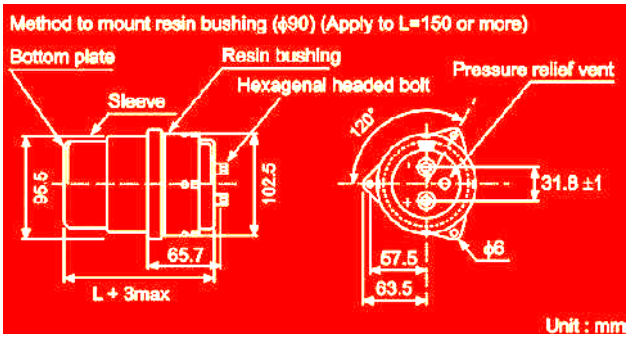
Item	Performance Characteristics
Working Voltage (V) tan δ (max.)	
Working Voltage (V) Z-25℃ / Z+20℃	

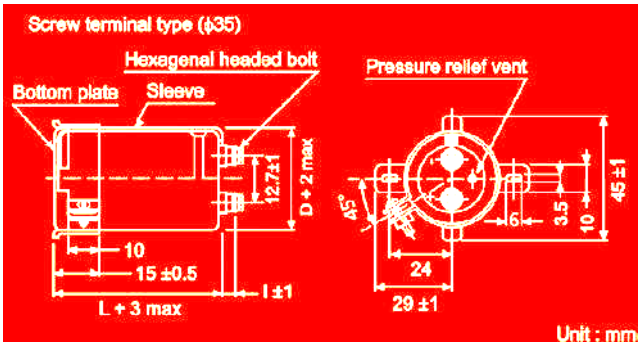
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	WH	338	M	2G	U	90	OO











Voltage (Code)		3 - Leg				2 - Leg			
Symbol	ΦD	51	63.5	76	90	51	63.5	76	90

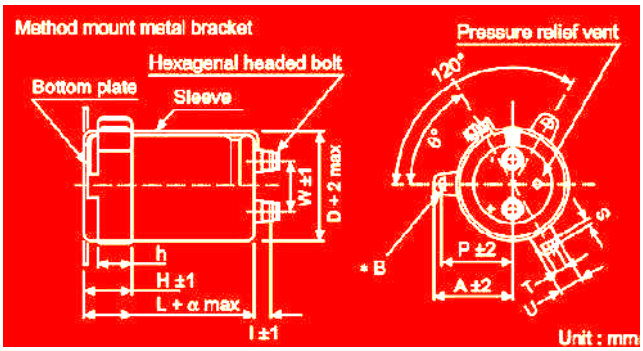
Voltage (Code)		350V (2V)		400V (2G)		450V (2W)		500V (2H)	
SV		400		450		500		550	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

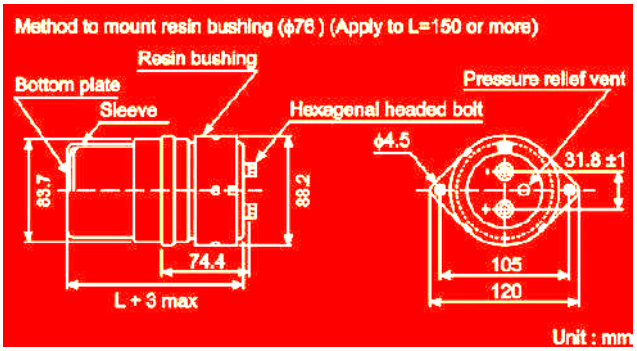
Item	Performance Characteristics

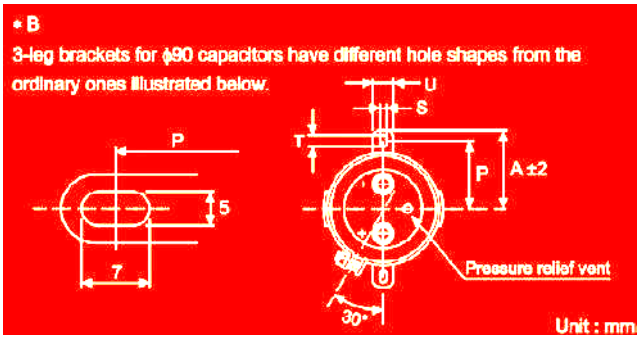
Working Voltage (V)
tan δ (max.)

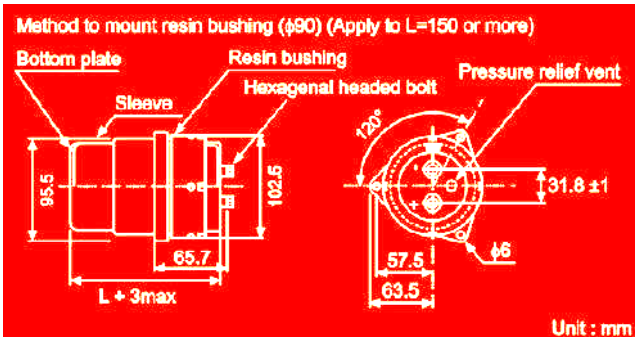
Working Voltage (V)
Z-25°C / Z+20°C

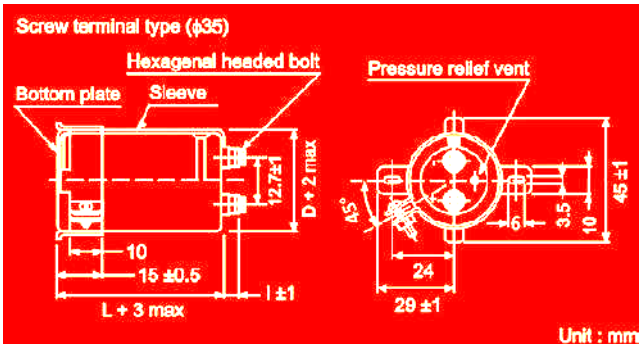
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	WL	478	M	2V	U	1N	OO











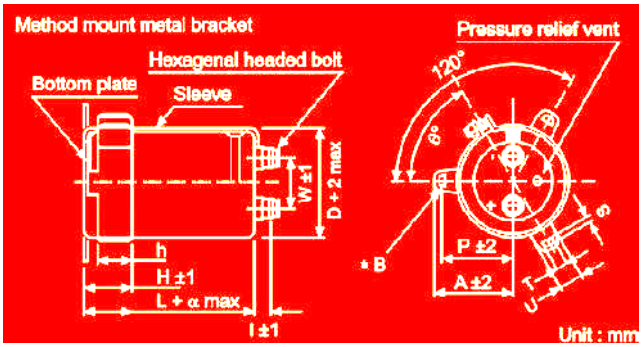
Voltage (Code)		3 - Leg			2 - Leg		
Symbol	ΦD	63.5	76	90	63.5	76	90

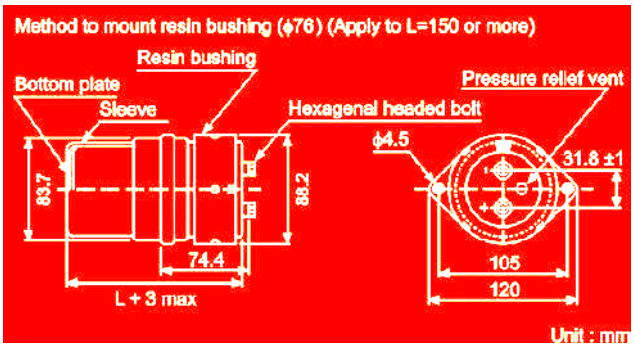
Voltage (Code)		350V (2V)		400V (2G)		450V (2W)	
SV		400		450		500	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

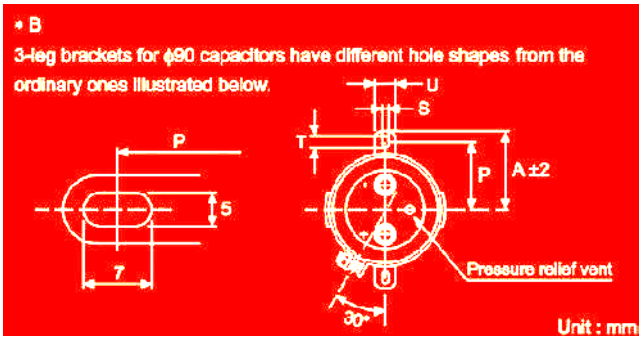
Item	Performance Characteristics

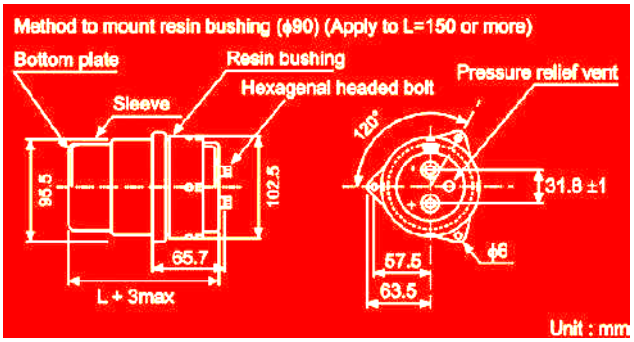
Working Voltage (V)
Z-25˚C / Z+20˚C

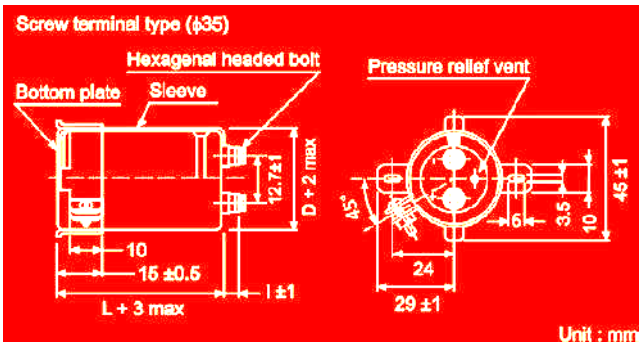
1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	WB	108	M	2D	Q	80	OO







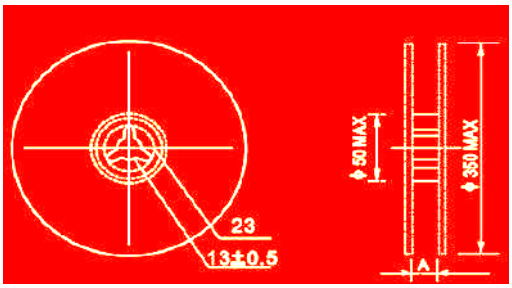


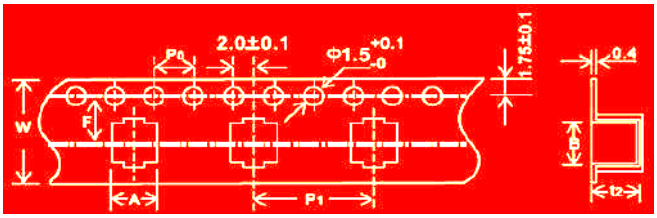


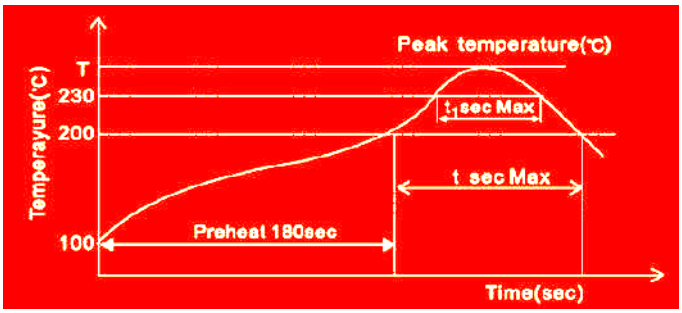
Voltage (Code)		3 - Leg				2 - Leg				
Symbol	ΦD	51	63.5	76	90	35	51	63.5	76	90

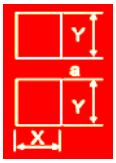
Voltage (Code)		160V (2C)			200V (2D)			250V (2E)		
SV		200			250			300		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current

Voltage (Code)		350V (2V)			400V (2G)		
SV		400			450		
Cap. (μF)	Code	Case Size	tan δ	Ripple Current	Case Size	tan δ	Ripple Current


50 MAX
350 MAX
23
13±0.5
A


2.0±0.1
P0
Φ1.5 +0.1 -0
h.75±0.1
0.4
W
F
A
P1
t2

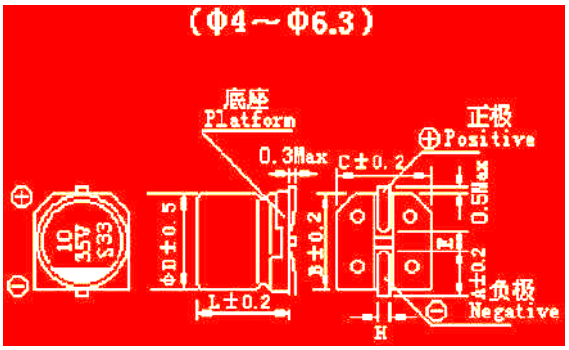

Peak temperature(℃)
T
230
200
100
Temperayure(℃)
t1 sec Max
t sec Max
Preheat 180sec
Time(sec)

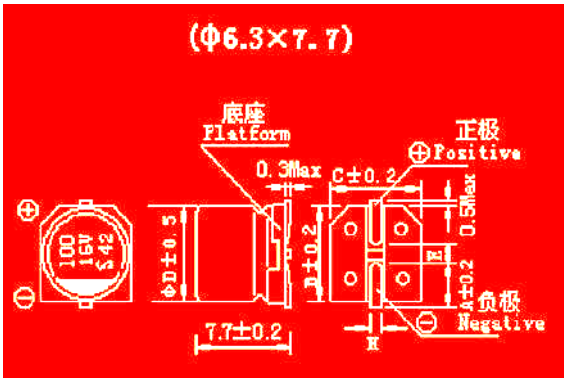

Y
a
Y
X

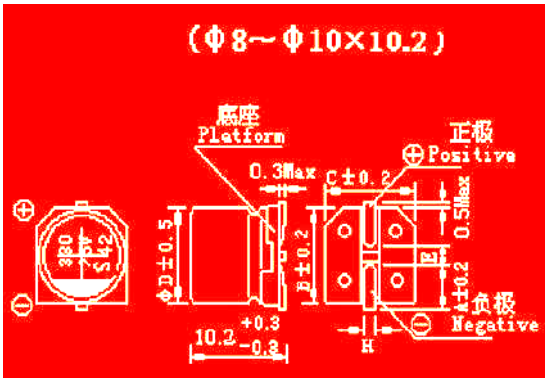
Item	Performance Characteristics

Working Voltage (V)
tanδ (max.) Φ4~6.3
Φ8~10

Working Voltage (V)
Z-40°C / Z+20°C







1	2 3	4 5 6	7	8 9	10	11 12	13 14
V	S1	477	M	1C	F	T2	TR

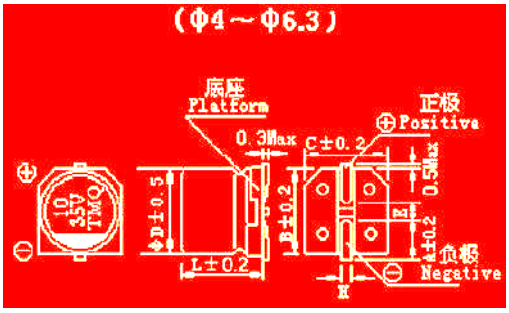
Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tanδ

Working Voltage (V)
Z-25℃ / Z+20℃
Z-40℃ / Z+20℃



1	2 3	4 5 6	7	8 9	10	11 12	13 14
V	T1	107	M	1C	E	54	TR

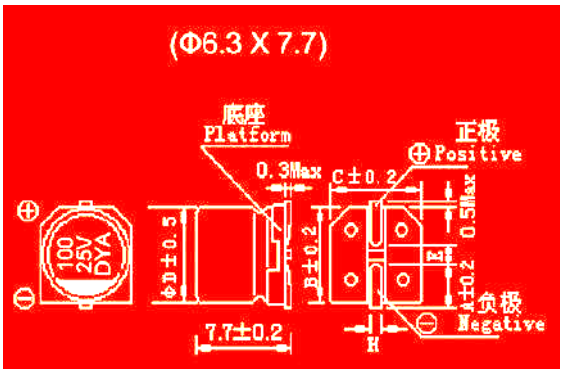
Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

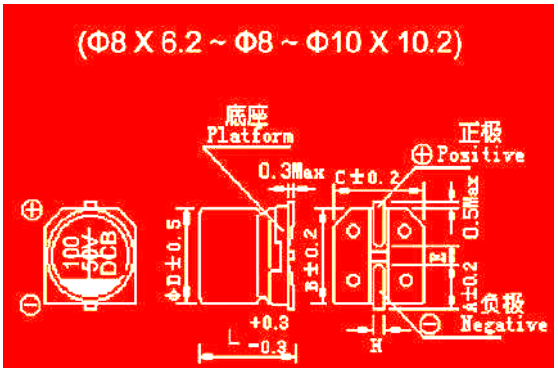
Voltage (Code)		35V (1V)		50V (1H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tanδ (max.)

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C





1	2 3	4 5 6	7	8 9	10	11 12	13 14
V	TD	477	M	1E	G	T2	TR

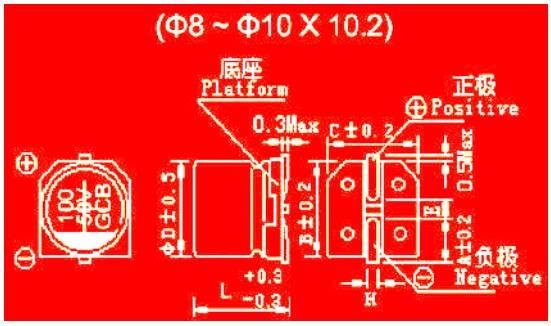
Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tanδ

Working Voltage (V)
Z-25℃ / Z+20℃



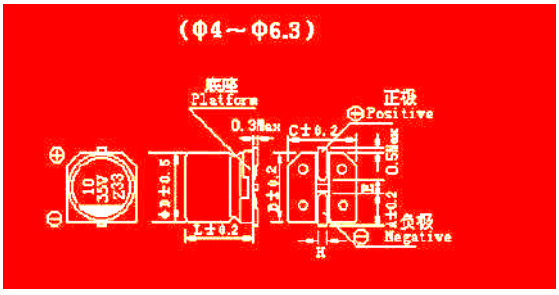
1	2 3	4 5 6	7	8 9	10	11 12	13 14
V	TG	225	M	2G	F	T2	TR

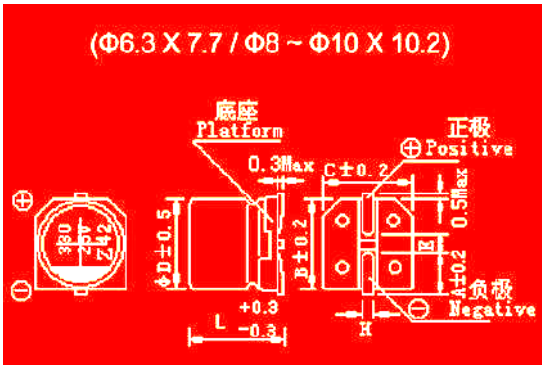
Voltage (Code)		400V (2G)	
Cap. (μF)	Code	Case Size	Ripple Current

Item	Performance Characteristics

Working Voltage (V)
tanδ (max.)

Working Voltage (V)
Z-25°C / Z+20°C
Z-40°C / Z+20°C
Z-55°C / Z+20°C





1	2 3	4 5 6	7	8 9	10	11 12	13 14
V	Z2	477	M	1E	G	T2	TR

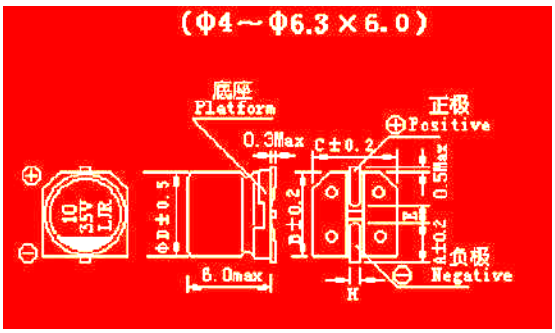
Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

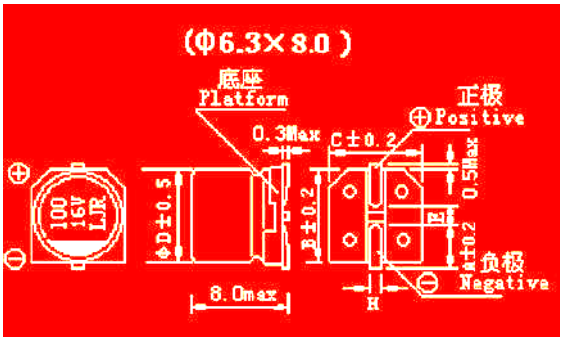
Voltage (Code)		50V (1H)			63V (1J)			80V(1K)			100V (2A)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current

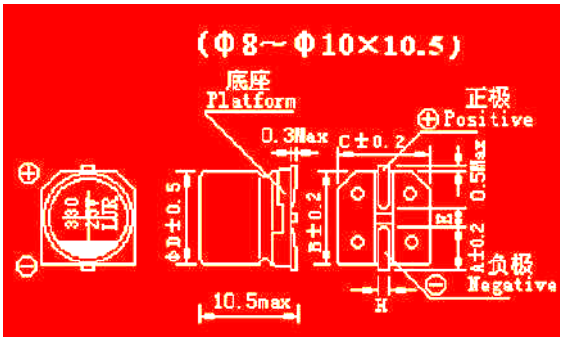
Item	Performance Characteristics

Working Voltage (V)
tanδ

Working Voltage (V)
Z-25˚C / Z+20˚C
Z-40˚C / Z+20˚C







1	2 3	4 5 6	7	8 9	10	11 12	13 14
V	TL	477	M	1E	G	1K	TR

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current

Voltage (Code)		35V (1V)		50V (1H)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current