

EN: This Datasheet is presented by the manufacturer.

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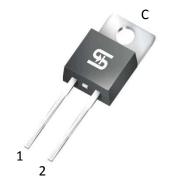




## 8A, 200V - 600V Glass Passivated Super Fast Rectifiers

#### **FEATURES**

- Glass passivated chip junction
- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21







#### **MECHANICAL DATA**

Case: TO-220AC

Molding compound: UL flammability classification rating 94V-0

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free) **Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: As marked

**Mounting torque:** 0.56 Nm max. **Weight:** 1.8 g (approximately)

# 0



**TO-220AC** 

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
SYMBOL	MUR820	MUR840	MUR860	UNIT	
$V_{RRM}$	200	400	600	V	
$V_{RMS}$	140	280	420	V	
$V_{DC}$	200	400	600	V	
I <sub>F(AV)</sub>	8			Α	
I <sub>FSM</sub>	100			А	
V <sub>F</sub>	0.975	1.30	1.70	V	
I <sub>R</sub>	5 250		μА		
t <sub>rr</sub>	25	50		ns	
$R_{ heta JC}$	3	2		°C/W	
T <sub>J</sub>	-55 to +175		°C		
T <sub>STG</sub>	-55 to +175			°C	
	$\begin{array}{c c} \textbf{SYMBOL} \\ \hline V_{RRM} \\ \hline V_{RMS} \\ \hline V_{DC} \\ \hline I_{F(AV)} \\ \hline I_{FSM} \\ \hline V_{F} \\ \hline I_{R} \\ \hline t_{rr} \\ \hline R_{\theta JC} \\ \hline T_{J} \\ \end{array}$	SYMBOL         MUR820           V <sub>RRM</sub> 200           V <sub>RMS</sub> 140           V <sub>DC</sub> 200           I <sub>F(AV)</sub> 0.975           I <sub>R</sub> 25           R <sub>BJC</sub> 3           T <sub>J</sub> 3	SYMBOL         MUR820         MUR840           V <sub>RRM</sub> 200         400           V <sub>RMS</sub> 140         280           V <sub>DC</sub> 200         400           I <sub>F(AV)</sub> 8           I <sub>FSM</sub> 100           V <sub>F</sub> 0.975         1.30           I <sub>R</sub> 5           250         5           R <sub>BJC</sub> 3           T <sub>J</sub> -55 to +175	SYMBOL         MUR820         MUR840         MUR860           V <sub>RRM</sub> 200         400         600           V <sub>RMS</sub> 140         280         420           V <sub>DC</sub> 200         400         600           I <sub>F(AV)</sub> 8         100           V <sub>F</sub> 0.975         1.30         1.70           I <sub>R</sub> 5         250           I <sub>rr</sub> 25         50           R <sub>θJC</sub> 3         2           T <sub>J</sub> -55 to +175	

Note 1: Pulse test with PW=300 $\mu$ s, 1% duty cycle Note 2: Test conditions:  $I_F$ =0.5A,  $I_R$ =1.0A,  $I_{RR}$ =0.25A



ORDERING INFORMATION						
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX <sup>(*)</sup>	PACKAGE	PACKING	
MUR8x0 (Note 1)	Н	C0	G	TO-220AC	50 / Tube	

Note 1: "x" defines voltage from 200V (MUR820) to 600V (MUR860)

<sup>\*:</sup> Optional available

EXAMPLE						
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION	
MUR820HC0G	MUR820	Н	C0	G	AEC-Q101 qualified Green compound	

#### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub>=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

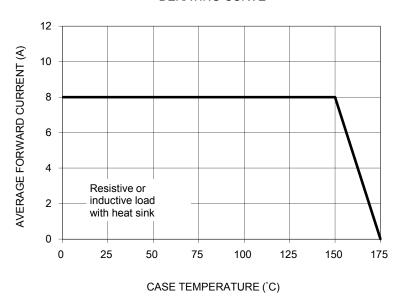


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

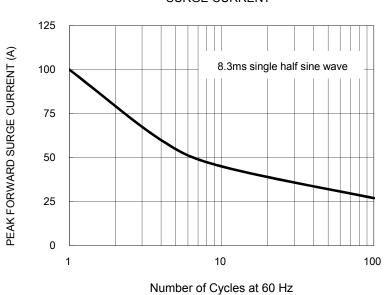


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

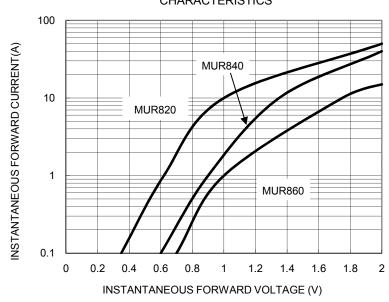
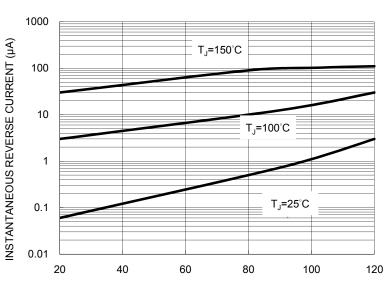
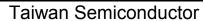


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

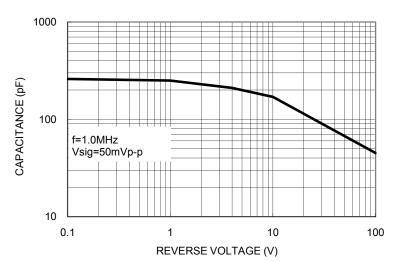


PERCENT OF RATED PEAK REVERSE VOLTAGE.(%)

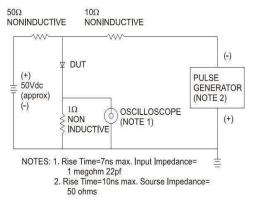


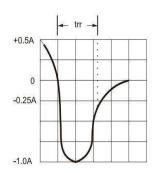


#### FIG. 5 TYPICAL JUNCTION CAPACITANCE

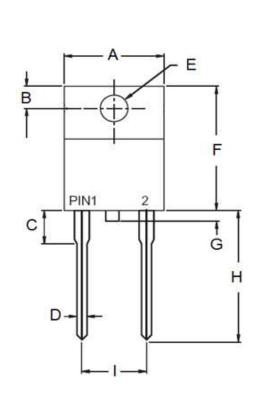


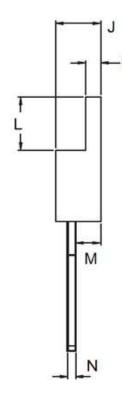
#### FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





# PACKAGE OUTLINE DIMENSIONS TO-220AC





DIM.	Unit	(mm)	Unit (inch)		
	Min	Max	Min	Max	
Α	-	10.50	-	0.413	
В	2.62	3.44	0.103	0.135	
С	2.80	4.20	0.110	0.165	
D	0.68	0.94	0.027	0.037	
Е	3.54	4.00	0.139	0.157	
F	14.60	16.00	0.575	0.630	
G	0.00	1.60	0.000	0.063	
Н	13.19	14.79	0.519	0.582	
I	4.95	5.20	0.195	0.205	
J	4.42	4.76	0.174	0.187	
K	1.14	1.40	0.045	0.055	
L	5.84	6.86	0.230	0.270	
М	2.20	2.80	0.087	0.110	
N	0.35	0.64	0.014	0.025	

### MARKING DIAGRAM



P/N = Marking Code
G = Green Compound
YWW = Date Code
F = Factory Code



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