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# **Common Mode Filters**

For high-speed differential signal line/general signal line

# ACM series

Туре:	ACM2012 ACM2520	[0805 inch]* [1008 inch] * Dimensions Code [EIA]
Issue date:	June 2012	

• All specifications are subject to change without notice.

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

**会TDK** 

# **Common Mode Filters** For High-speed Differential Signal Line / General Signal Line

# ACM Series ACM2012, 2520

# FEATURES

- · Although greatly miniaturized, this wire-wound chip-type filter maintains the characteristics needed for a common mode filter. Common mode impedance is  $1000\Omega$  [at 100MHz], so this filter is greatly effective in supporting noise.
- · Almost no affect upon even high speed signals since differential mode impedance is kept low.
- This series includes both 2-line and 3-line types. They are used for various types of circuits and noise.

# **APPLICATIONS**

- Used for radiation noise suppression for any electronic devices.
- · Used to counter common mode noise affecting signals within high-speed lines.
- USB line for personal computers and peripheral equipment.
- IEEE1394 line for personal computers, DVC, STB, etc.
- · LVDS, panel link line for liquid crystal display panels.

### **TEMPERATURE RANGES**

Operating	–40 to +85°C	
Storage(After mount)	–40 to +85°C	

#### PACKAGING STYLE AND QUANTITIES

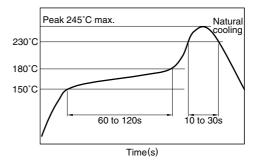
Packaging style	Туре	Reel	Quantity
Taping	ACM2012	ø180mm	2000 pieces/reel
	ACIVIZUTZ	ø330mm	10000 pieces/reel
	ACM2520	ø180mm	2000 pieces/reel
	ACIM2520	ø330mm	10000 pieces/reel

### **PRODUCT IDENTIFICATION**

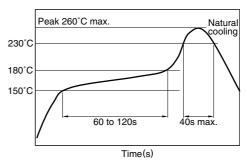
ACM	2012	- 900 -	2P	- T	
(1)	(2)	(3)	(4)	(5)	(6)

- (1) Series name
- (2) Dimensions L×W 2012: 2.0×1.2mm
- (3) Impedance[at 100MHz] 900: 90Ω
- (4) Number of line 2P: 2-line
  - 3P: 3-line
- (5) Packaging style T: ø180mm reel taping TL: ø330mm reel taping
- (6) TDK internal code

# **RECOMMENDED SOLDERING CONDITIONS RECOMMENDED TEMPERATURE PROFILE** FOR LEAD-FREE SOLDER



### **REFLOW PROFILE FOR SOLDER HEAT RESISTANCE**



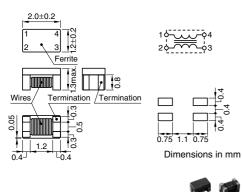
 Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

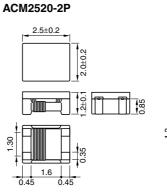
· All specifications are subject to change without notice.

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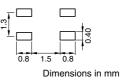
# SHAPES AND DIMENSIONS/CIRCUIT DIAGRAMS/RECOMMENDED PC BOARD PATTERNS 2-LINE TYPE

# ACM2012-2P



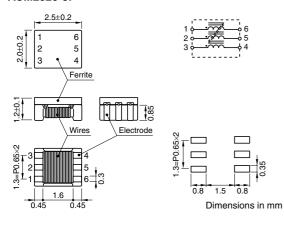








# 3-LINE TYPE ACM2520-3P





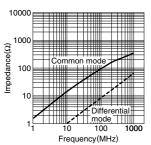
# **ELECTRICAL CHARACTERISTICS**

Part No.	Impedance	DC resistance	Rated voltage	Rated current
	(Ω)typ.[100MHz]	(Ω)max.[per 1 line]	Edc(V)max.	ldc(A)max.
2-LINE				
ACM2012-900-2P	90	0.19	50	0.4
ACM2012-121-2P	120	0.22	50	0.37
ACM2012-201-2P	200	0.25	50	0.35
ACM2012-361-2P	360	0.5	50	0.22
ACM2520-301-2P	300	0.35	20	0.4
ACM2520-451-2P	450	0.4	20	0.35
ACM2520-601-2P	600	0.45	20	0.3
ACM2520-102-2P	1000	0.9	20	0.2
3-LINE				
ACM2520-801-3P	800	1.6	20	0.15
ACM2520-801-3P	800	1.6	20	0.15

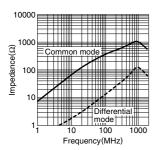
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# TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS 2-LINE

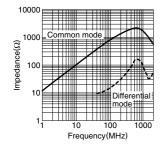
### ACM2012-900-2P



#### ACM2520-301-2P



3-LINE ACM2520-801-3P



# MEASURING CIRCUITS 2-LINE

Common mode



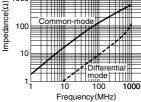
Differential mode



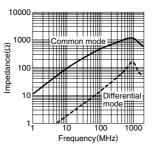
# 1000

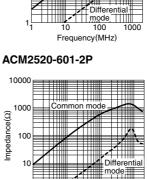
ACM2012-121-2P

10000



#### ACM2520-451-2P





100

Frequency(MHz)

1000

ACM2012-201-2P

10000

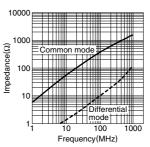
1000

100

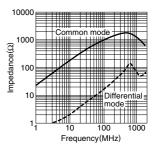
10

Impedance( $\Omega$ )

#### ACM2012-361-2P

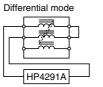


#### ACM2520-102-2P



3-LINE





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