

# Common Mode Filters

For general signal line/power line

ZJY series

Type:            **ZJY51R5**

Issue date:     September 2011

- 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.
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# Common Mode Filters

## For General Signal Line / Power Line

Conformity to RoHS Directive

### ZJY Series ZJY51R5

#### FEATURES

- A common mode filter for distortion-free removal of noise from transmitted signals. Best common mode filter for transmission of high quality signals.
- Best filter for countering the common mode noise resulting from data signal processing by PCs, phone equipment, etc.
- Highly appropriate for IC board mounting due to DIP type structure.
- Due to a maximum current tolerance of 2A, can also be used to counter power line noise.

#### APPLICATIONS

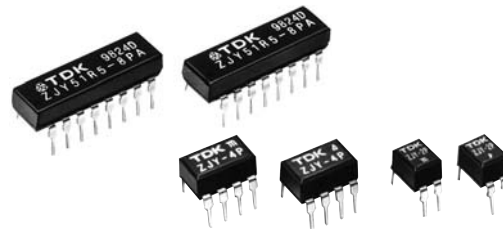
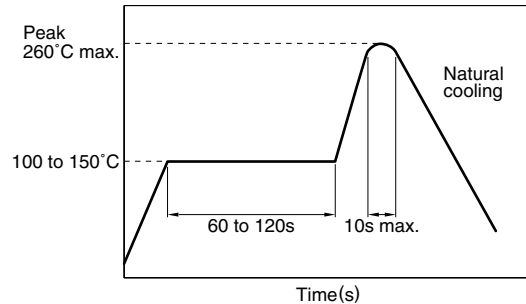
Personal computers, telephones, LANs, ISDNs, digital PBXs, electronic games, CTVs, CD-ROM drives, 8mm video equipment, and other electronic devices

#### PACKAGING STYLE AND QUANTITIES(Tube style)

Part No.	Quantity
ZJY51R5-2P-01	80 pieces
ZJY51R5-2PB-01	80 pieces
ZJY51R5-2PL-01	80 pieces
ZJY51R5-4P-01	40 pieces
ZJY51R5-M4PA-01	40 pieces
ZJY51R5-8PA-01	20 pieces

#### RECOMMENDED SOLDERING CONDITION

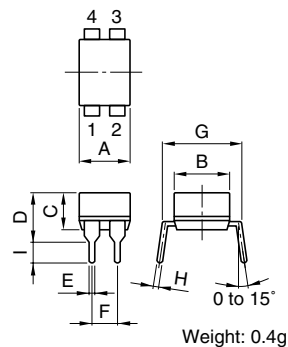
#### RECOMMENDED FLOW TEMPERATURE PROFILE FOR LEAD-FREE SOLDER



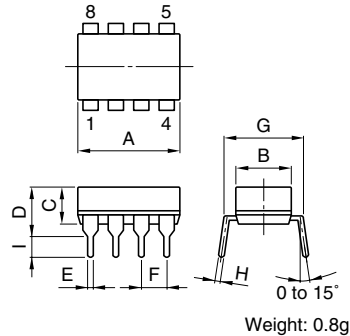
#### SHAPES AND DIMENSIONS

##### TRANSFER MOLD

##### ZJY51R5-2P-01, -2PB-01, -2PL-01

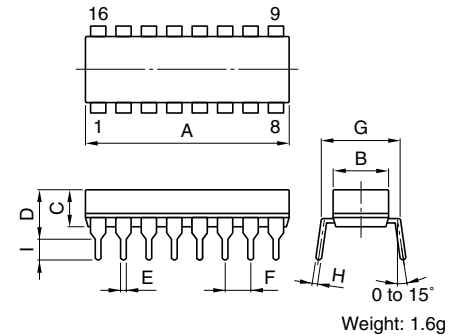


##### ZJY51R5-4P-01, -M4PA-01



##### PLASTIC CASE

##### ZJY51R5-8PA-01

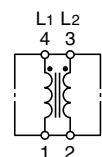


Part No.	Dimensions in mm									
	A max.	B max.	C max.	D max.	E	F±0.25	G	H	I	
ZJY51R5-2P-01, -2PB-01, -2PL-01*	5.5	6.86	4.57	5.84	0.5	2.54	7.62	0.25	2.54	
ZJY51R5-4P-01, -M4PA-01	10.5	6.86	4.57	5.84	0.5	2.54	7.62	0.25	2.54	
ZJY51R5-8PA-01	23.5	7	4.6	6.3	0.5	2.54	7.62	0.25	2.54	

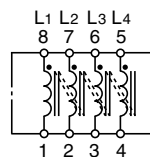
\* The ".01" designation at the end of the product code indicates Lead-free compatible product.

#### CIRCUIT DIAGRAMS

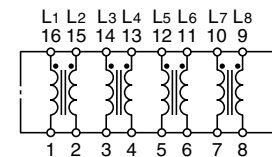
##### ZJY51R5-2P-01, -2PB-01, -2PL-01



##### ZJY51R5-4P-01, -M4PA-01



##### ZJY51R5-8PA-01



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### ELECTRICAL CHARACTERISTICS

Part No.	ZJY51R5-2P-01, -4P-01	ZJY51R5-2PB-01*1	ZJY51R5-2PL-01*2	ZJY51R5-M4PA-01	ZJY51R5-8PA-01
Rated voltage Edc(V)	50	50	50	50	50
Rated current (A)	2	2	2	0.5	0.5
Test voltage Edc(V) [Between terminals for 5s]	125	125	250	125	250
Insulation resistance (MΩ) [Between terminals at DC.50V for 1min]	100 min.	100 min.	100 min.	100 min.	100 min.
DC resistance (Ω) [Each line]	0.12 max.	0.12 max.	0.10 max.	0.25 max.	0.07 max.
Operating temperature range (°C)	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85
Storage temperature range(After mount)(°C)	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85
Impedance (Ω) [+5 to +35°C]	[20 to 300MHz]	[6 to 20MHz]	[20 to 100MHz]	[20 to 300MHz]	[20 to 300MHz]

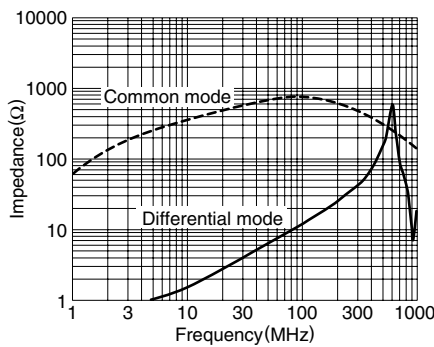
\*1 This type has improved low-range characteristics.

\*2 This type is wrapped separately (for communication lines).

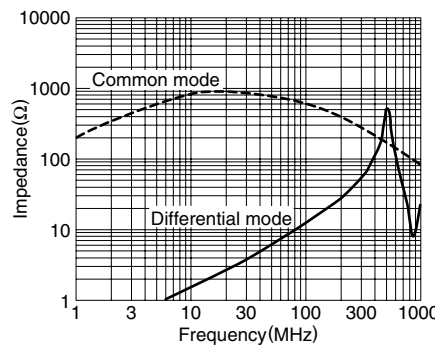
### TYPICAL ELECTRICAL CHARACTERISTICS

#### IMPEDANCE CHARACTERISTICS (for 1 element)

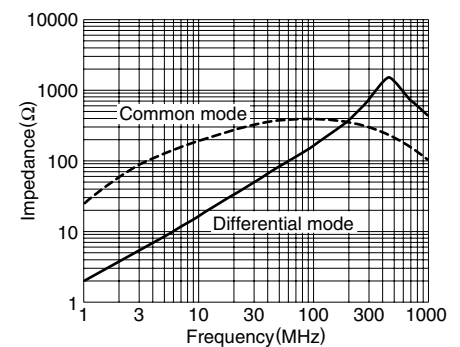
ZJY51R5-2P-01, -4P-01, -8PA-01



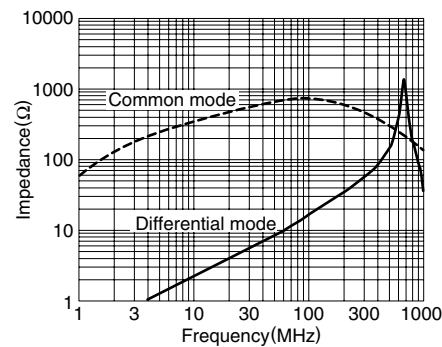
ZJY51R5-2PB-01



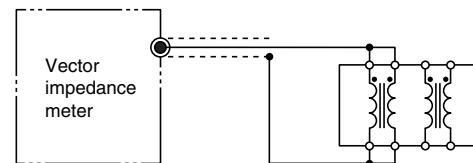
ZJY51R5-2PL-01



ZJY51R5-M4PA-01



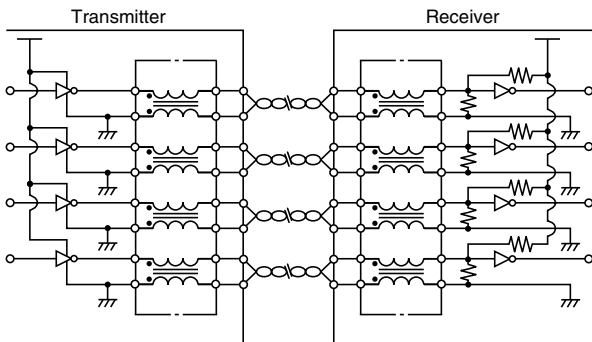
#### MEASURING CIRCUIT



Vector impedance meter(YHP 4191A equivalent)  
Measuring at each Common mode choke coil

### TYPICAL APPLICATION

An application example showing how radiation noise is prevented when transmitter and receiver are connected via twisted pair cables.



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