E M C Components



Common mode filters

Ultra high-speed differential signal line (HDMI, LVDS, MIPI, USB3.0) **MCZ-DH** series









MCZ1210DH_CP type















FEATURES

- O Multilayer common mode filter for ultra high-speed differential lines.
- Widened frequency range for differential mode transmission up to 6.0GHz while ensuring common mode impedance.
- O Suppresses common mode noise without influencing the high-speed differential transmission line signal.
- \bigcirc Characteristics impedance for differential mode is 100 $\!\Omega.$
- Optimal for noise suppression of ultra high-speed differential transmission lines, HDMI, USB3.0, etc.
- Operating temperature range: -40 to +85°C

APPLICATION

- Ultra high-speed differential interfaces (HDMI,LVDS,MIPI,USB3.0)
- O Servers, PCs, DSC, DVC, TV, game, wearable equipments.

PART NUMBER CONSTRUCTION

MCZ		1210		D	Н	12	20	C	P	7	Γ	A)G	
	Series	name		mensions ×0.5 mm		duct tion code		dance 00MHz		rnal de	Pack sty	aging yle	Inte	

CHARACTERISTICS SPECIFICATION TABLE

Comm	on mode impedance	DC resistance	Rated current	Rated voltage	Insulation resistance	Part No.
[100MI	łz]	[1 line]				
(Ω)	Tolerance	(Ω)max.	(mA)max.	(V)max.	(MΩ)min.	
12	±5Ω	1.50	100	5	10	MCZ1210DH120CPTA0G
45	±25%	2.50	100	5	10	MCZ1210DH500CPTA0G
80	±25%	3.00	100	5	10	MCZ1210DH800CPTA0G

^{*} Impedance (Ω) at 100MHz in PART NUMBER CONSTRUCTION is a reference value.

Measurement equipment

Measurement item	Product No.	Manufacturer
Common mode impedance	4991A+16092A	Keysight Technologies
DC resistance	Type-755611	Yokogawa
Insulation resistance	4339B	Keysight Technologies

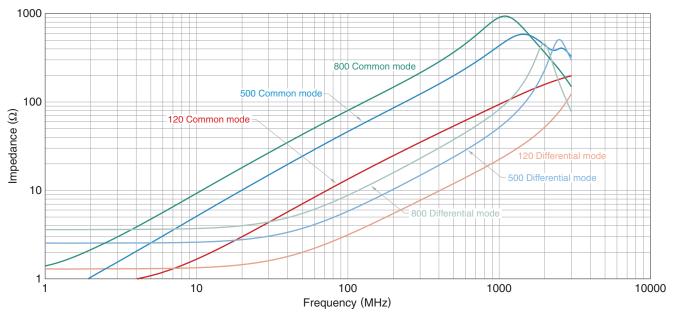
^{*} Equivalent measurement equipment may be used.





MCZ1210DH_CP type

IMPEDANCE VS. FREQUENCY CHARACTERISTICS



Measurement equipment

Product No.	Manufacturer
4991A+16092A	Keysight Technologies

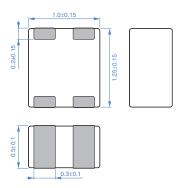
^{*} Equivalent measurement equipment may be used.

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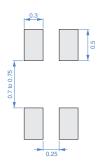


MCZ1210DH_CP type

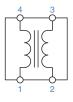
SHAPE & DIMENSIONS



RECOMMENDED LAND PATTERN

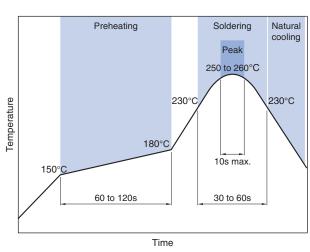


CIRCUIT DIAGRAM



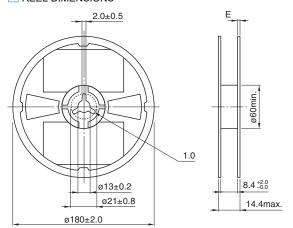
No polarity

RECOMMENDED REFLOW PROFILE



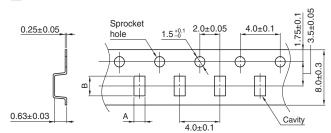
PACKAGING STYLE

REEL DIMENSIONS



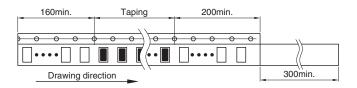
Dimensions in mm

■ TAPE DIMENSIONS



Dimensions in mm

Туре	Α	В
MCZ1210DH_CP	1.17±0.03	1.40±0.03



PACKAGE QUANTITY

Package quantity	4 000 ncs/reel

TEMPERATURE RANGE, INDIVIDUAL WEIGHT

Operating temperature range	Storage temperature range *	Individual weight
-40 to +85 °C	-40 to +85 °C	3.0 mg

^{*} The storage temperature range is for after the assembly.

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products

REMINDERS

The storage period less).	is within 12 months. Be sure to follow the storage	ge conditions (temperature: 5 to 40°C, humidity: 10 to 75% RH o				
If the storage period	elapses, the soldering of the terminal electrodes	may deteriorate.				
O Do not use or store	o not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).					
The preheating tem	Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.					
_	Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.					
•	When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.					
 Self heating (tempore) design. 	Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set therm design.					
• •	e coil for the circuit board design of the non-magn occur due to magnetic interference.	etic shield type.				
Ouse a wrist band to	discharge static electricity in your body through t	he grounding wire.				
O Do not expose the p	products to magnets or magnetic fields.					
O Do not use for a pu	pose outside of the contents regulated in the deli	very specifications.				
home appliances, a industrial robots) un The products are n quality require a mosociety, person or pulf you intend to use	amusement equipment, computer equipment, p der a normal operation and use condition. ot designed or warranted to meet the requirem ore stringent level of safety or reliability, or whose roperty.	ctronic equipment (AV equipment, telecommunications equipment ersonal equipment, office equipment, measurement equipment ents of the applications listed below, whose performance and/o se failure, malfunction or trouble could cause serious damage to you have special requirements exceeding the range or conditions				
(3) Medical equipme	quipment (cars, electric trains, ships, etc.) ent n control equipment elated equipment	 (7) Transportation control equipment (8) Public information-processing equipment (9) Military equipment (10) Electric heating apparatus, burning equipment (11) Disaster prevention/crime prevention equipment (12) Safety equipment 				

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

applications

(13) Other applications that are not considered general-purpose