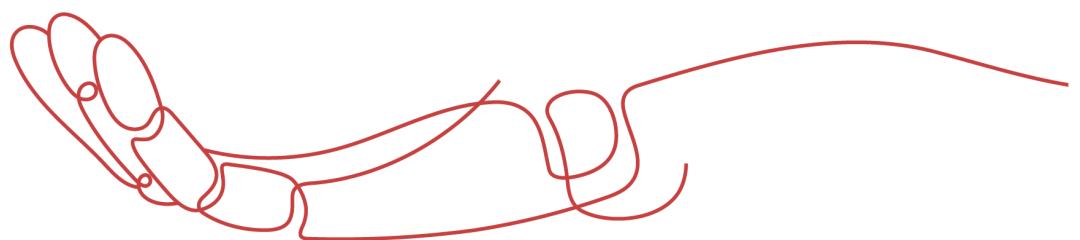


PRODUCT DATA SHEET



To learn more about JGSEMI, please visit our website at

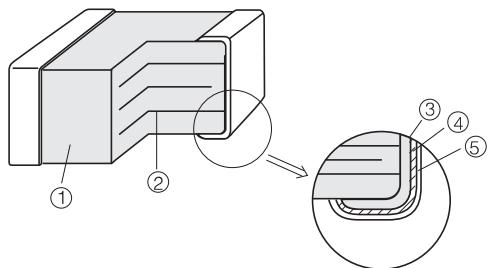


Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

Features

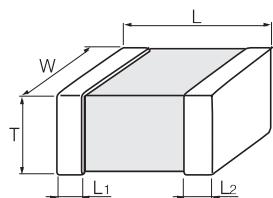
- Excellent ESD suppression due to original advanced material technology
- Having large electrostatic resistance meeting IEC61000-4-2, Level 4 standard
- Having no polarity (bipolar) facilitating replacing Zener Diodes. Capable of replacing 2 Zener Diodes and 1 Capacitor.
- Lead-free plating terminal electrodes enabling great solderability
- Wide range of products is available by adopting multi-layer structure, meeting various needs.
- Low capacitance versions for DC voltage lines of high speed busses
- Ultra low capacitance for high speed signal line
- Applicable to high-speed signal lines, such as interfaces (e.g. USB 2.0, IEEE1394, HDMI, and so on), due to our original ultra-low capacitance technology.
- RoHS compliant

Construction



No.	Name	
①	Semiconductive Ceramics	
②	Internal electrode	
③	Substrate electrode	
④	Terminal electrode	
⑤	Interdigitate electrode	
	External electrode	

Dimensions in mm (not to scale)



Size(inch)	L	W	T	L ₁ , L ₂
0201	0.60±0.03	0.30±0.03	0.30±0.03	0.15±0.05
0402	1.00±0.05	0.50±0.05	0.50±0.05	0.2±0.1
0603	1.6±0.1	0.8±0.1	0.8±0.1	0.3±0.2

Features

- Multilayer monolithic ceramic construction for high speed signal lines
- Ideal for USB 2.0, IEEE1394, and HDMI high speed data busses
- Applicable to high-speed signal lines, such as interfaces (e.g. USB 2.0, IEEE1394, HDMI, and so on), due to our original material technology and multilayer technology.
- Capacitance: 0.8 to 2.1 pF typ.

Recommended Applications

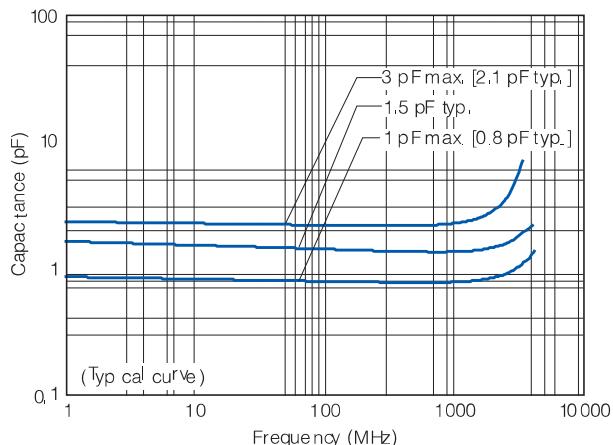
Mobile phone	Antenna circuit, External IF
DSC, DVC	USB2.0, IEEE1394
PC, PDA	USB2.0, IEEE1394, LAN1000BASE
TV, DVD	USB2.0, IEEE1394, HDMI
Game console	Controller, External IF

Ratings and Characteristics

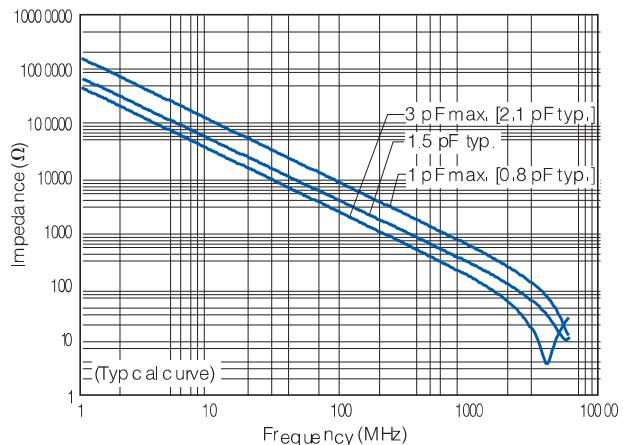
Size	Part No.	Maximum allowable voltage DC (V)	Nominal varistor voltage at 1mA (V)	Capacitance (pF) at 1MHz	Maximum ESD IEC61000-4-2
0402	0402ESDA-05N	5	25	5	Contact discharge : 8kV
	0402ESDA-09N	9	30	3	
	0402ESDA-LF	18	200	3	
	0402ESDA-LC	24	200	1	
	0402ESDA-LP	24	200	0.6	
0603	0603ESDA-05N	5	25	5	Contact discharge : 8kV
	0603ESDA-09N	9	30	3	
	0603ESDA-LF	18	200	3	
	0603ESDA-LC	24	200	1	

- Operating Temperature Range: -40 to 85 °C
- * Recommend soldering method : Reflow soldering

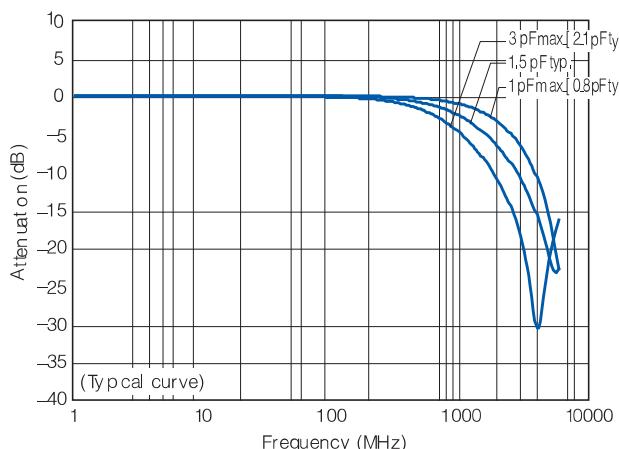
Capacitance vs. Frequency



Impedance vs. Frequency

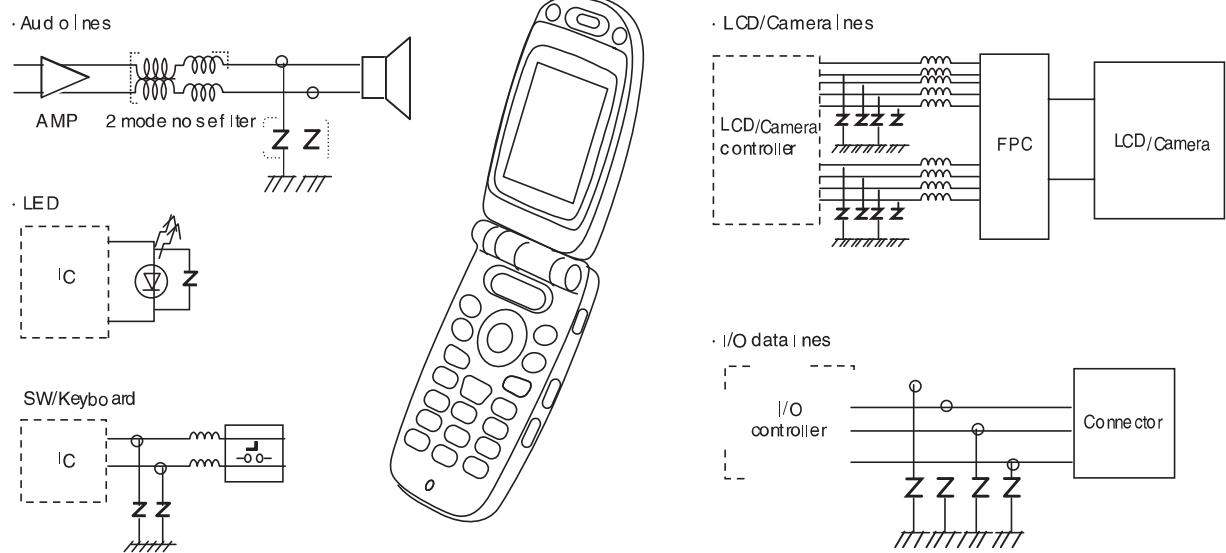


Attenuation vs. Frequency

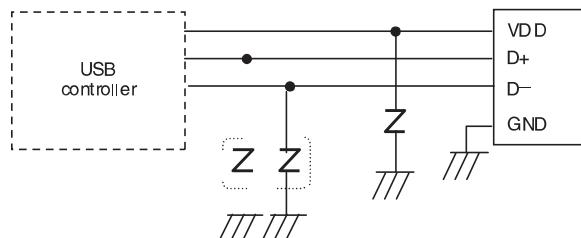


Applications

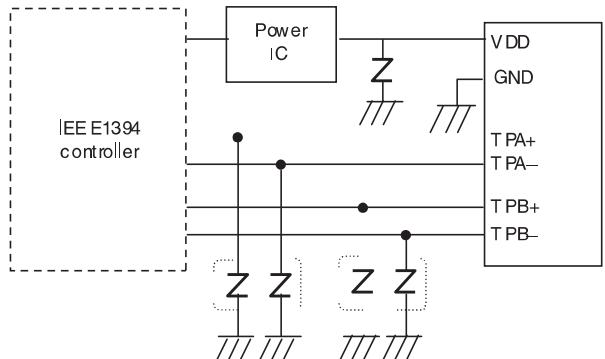
● Mobile Phone



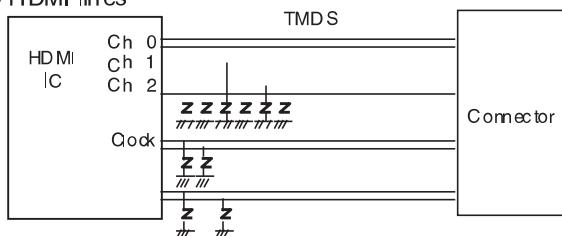
● USB 1.1/2.0 lines



● IEEE 1394 lines



● HDMI lines



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