

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components
20736 Marilla Street Chatsworth
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Features

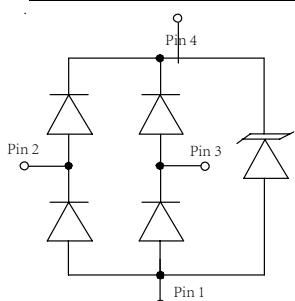
- Halogen free available upon request by adding suffix "-HF"
- Ultra low capacitance: 0.3pF typical
- Low operating voltage: 5V
- Low Clamping Voltage
- Protects two data lines and one power line
- Low Capacitance
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

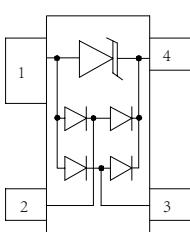
- Operating Junction Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact		±30 ±30	KV
IEC61000-4-4 (EFT): @ 5/50us		40	A
IEC61000-4-5 (Lightning): @ 8/20us		8	A
Peak Pulse Power: @ 8/20us	Ppk	130	W

Dimensions and Pin Configuration

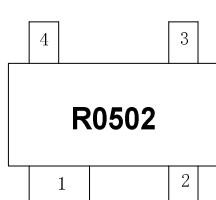


Circuit Diagram



Pin Schematic

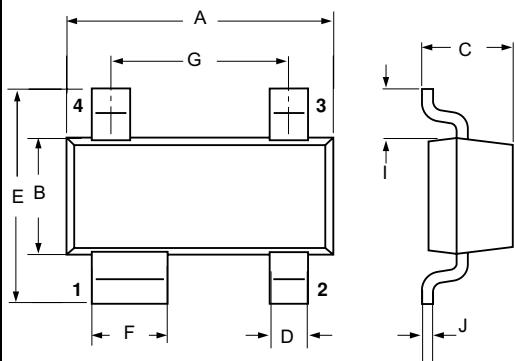
Marking Information



LSR05

**5 Volts
ESD Protector**

SOT-143



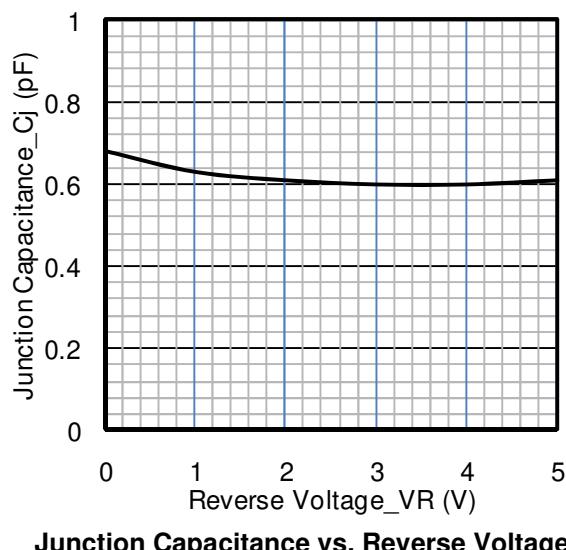
DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.110	.120	2.80	3.04	
B	.047	.055	1.20	1.40	
C	.031	.048	0.80	1.22	
D	.011	.020	0.30	0.51	
E	.082	.104	2.10	2.64	
F	.029	.037	0.76	0.94	
G	.070	.080	1.78	2.03	
I	.015	.024	0.40	0.60	
J	.003	.008	0.08	0.20	

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

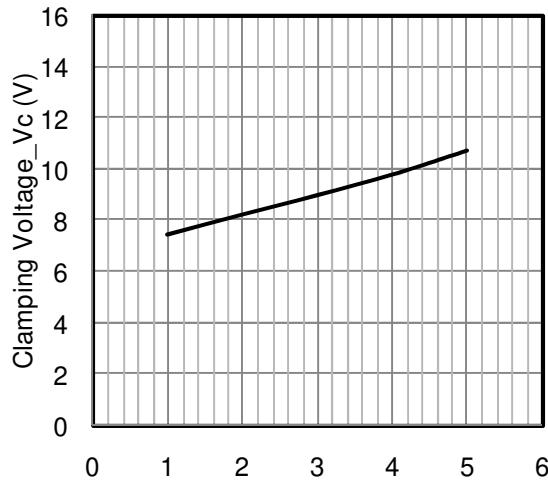
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	Any I/O pin to ground
Breakdown Voltage	VBR	6			V	IT = 1mA, any I/O pin to ground
Reverse Leakage Current	I _R		0.005	0.5	µA	VRWM = 5V, any I/O pin to ground
Clamping Voltage	V _C			9	V	IPP = 1A (8 x 20µs pulse), any I/O pin to ground
Clamping Voltage	V _C			12	V	IPP = 5A (8 x 20µs pulse), any I/O pin to ground
Junction Capacitance	C _J		0.3	0.4	pF	VR = 0V, f = 1MHz, between I/O pins
Junction Capacitance	C _J			0.8	pF	VR = 0V, f = 1MHz, any I/O pin to ground

Note 1: I/O pins are pin 2 & 3

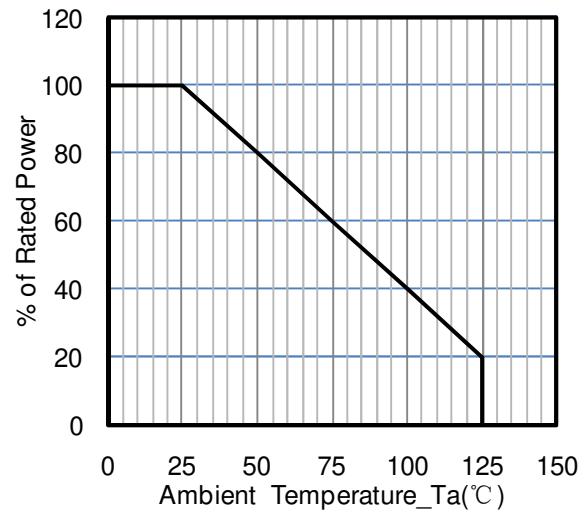
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



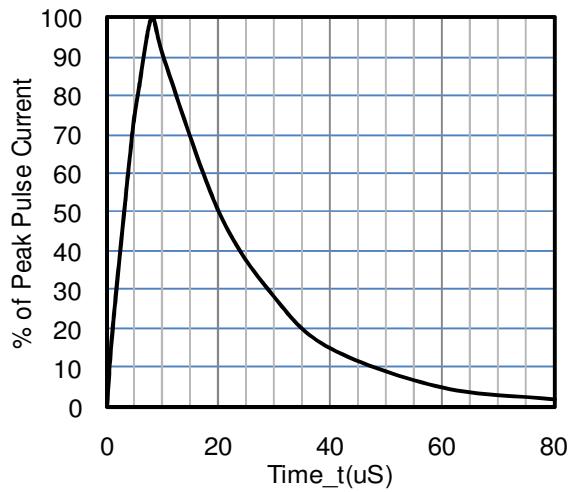
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



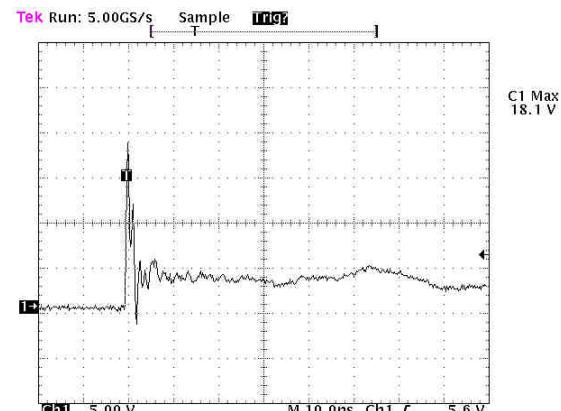
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20μs Pulse Waveform



ESD Clamping Voltage

8 kV Contact per IEC61000-4-2



Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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