



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



Micro Commercial Components
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Features

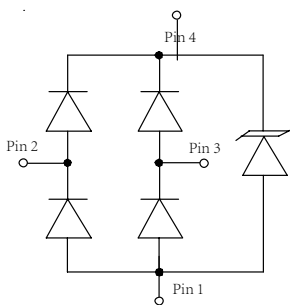
- Halogen free available upon request by adding suffix "-HF"
- Ultra low capacitance: 0.3pF typical
- Low operating voltage: 5V
- Low Clamping Voltage
- Protects two data lines and one power line
- Low Capacitance
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

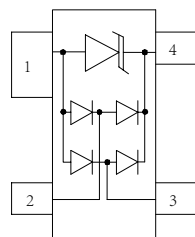
- Operating Junction Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

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

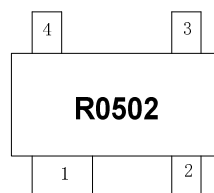


Circuit Diagram



Pin Schematic

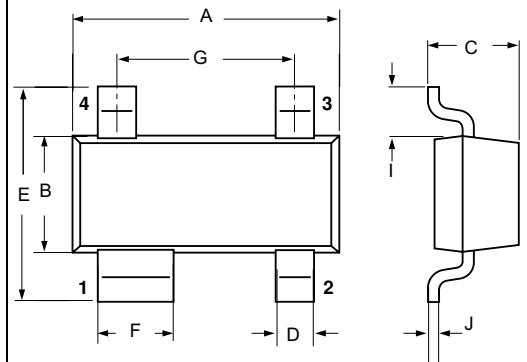
Marking Information



LSR05

5 Volts ESD Protector

SOT-143



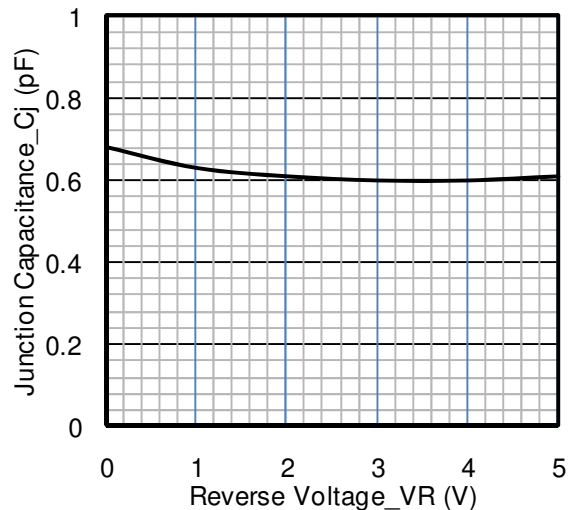
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.047	.055	1.20	1.40	
C	.031	.048	0.80	1.22	
D	.011	.020	0.30	0.51	
E	.082	.104	2.10	2.64	
F	.029	.037	0.76	0.94	
G	.070	.080	1.78	2.03	
I	.015	.024	0.40	0.60	
J	.003	.008	0.08	0.20	

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	Any I/O pin to ground
Breakdown Voltage	V_{BR}	6			V	$I_T = 1\text{mA}$, any I/O pin to ground
Reverse Leakage Current	I_R		0.005	0.5	μA	$V_{RWM} = 5\text{V}$, any I/O pin to ground
Clamping Voltage	V_C			9	V	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse), any I/O pin to ground
Clamping Voltage	V_C			12	V	$I_{PP} = 5\text{A}$ (8 x 20 μs pulse), any I/O pin to ground
Junction Capacitance	C_J		0.3	0.4	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, between I/O pins
Junction Capacitance	C_J			0.8	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$, any I/O pin to ground

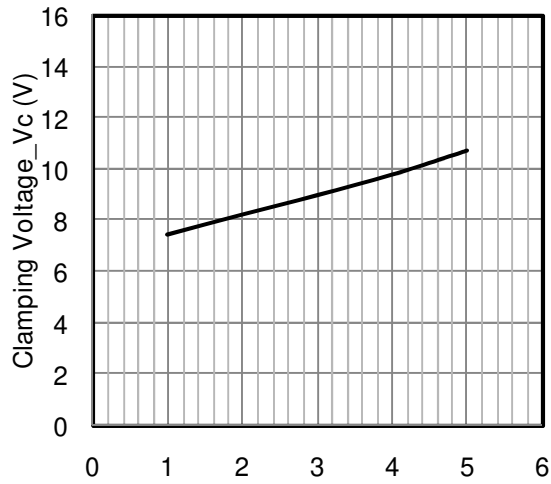
Note 1: I/O pins are pin 2 & 3

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

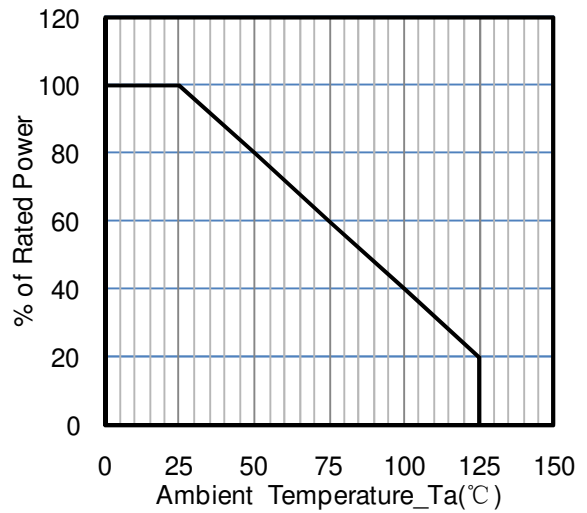


Junction Capacitance vs. Reverse Voltage

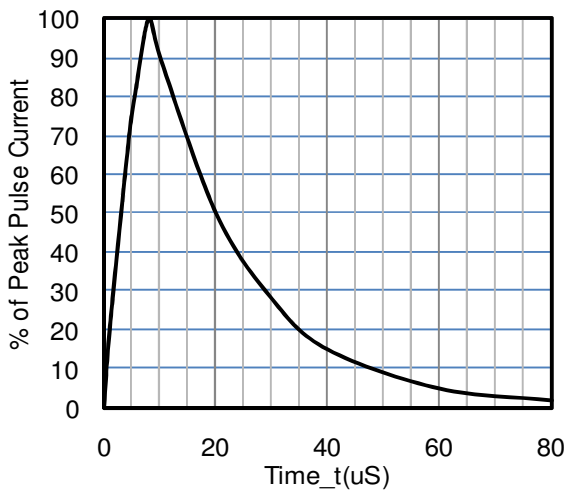
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



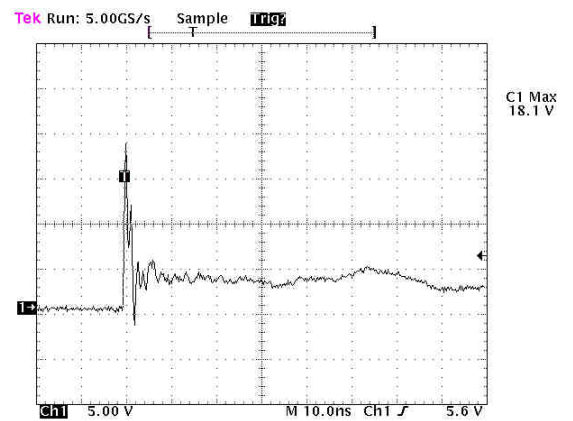
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20uS Pulse Waveform



ESD Clamping Voltage

8 kV Contact per IEC61000-4-2



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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