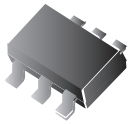
RoHS Device
Halogen Free

Features

- Protects five I/O lines
- Low capacitance
- Working voltages : 5V
- Low leakage current
- Response Time is < 1 ns
- Low operating and clamping voltages
- Solid-state silicon avalanche technology
- Device Meets MSL 1 Requirements
- ROHS compliant



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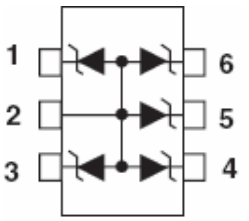


Main applications

- Cellular Handsets and Accessories
- Cordless Phones
- Personal Digital Assistants (PDA's)
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- MP3 Players

Protection solution to meet

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC 6 1000-4-5 (Lightning) 2.5A (8/20us)

Maximum ratings (Tamb=25℃ Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PPP}	100	Watts
Peak Pulse Current(tp=8/20μs waveform)	I_{PP}	2.5	A
ESD Rating per IEC61000-4-2： Contact Air		8 15	KV
Lead Soldering Temperature	T_L	260 (10 sec.)	℃
Operating Temperature Range	T_J	-55 ~ 150	℃
Storage Temperature Range	T_{STG}	-55 ~ 150	℃

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied,damage may occur and reliability may be affected.

*Other voltages may be available upon request.

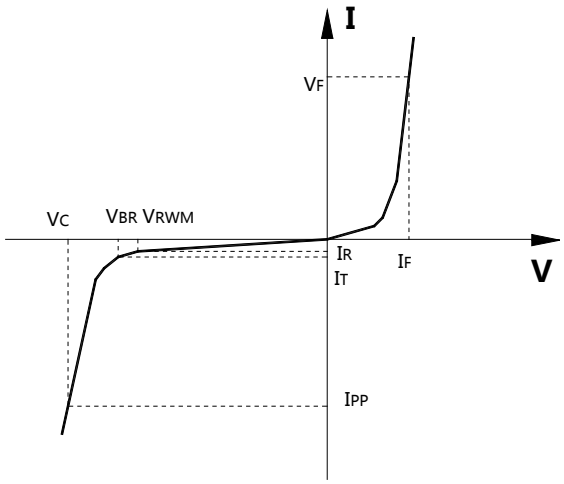
1. Nonrepetitive current pulse, per Figure 1.

Electrical characteristics (Tamb=25℃ Unless Otherwise Specified)

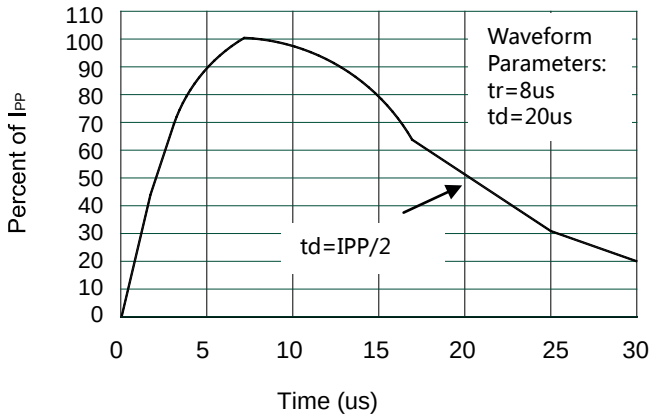
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	IT = 1mA,	6.0			V
I_R	Reverse Leakage Current	V_{RWM} = 5V,			100	nA
V_F	Diode Forward Voltage	IF = 15mA		0.85	1.2	V
V_C	Clamping Voltage	I_{PP} = 1A, tp =8/20μs,			10	V
		I_{PP} = 2.55A, tp =8/20μs,			13	V
I_{PP}	Peak Pulse Current	tp =8/20μs			2.5	A
C_J	Junction Capacitance	V_R = 0V, f = 1MHz,		15	20	pF

Junction capacitance is measured in VR=0V,F=1MHz

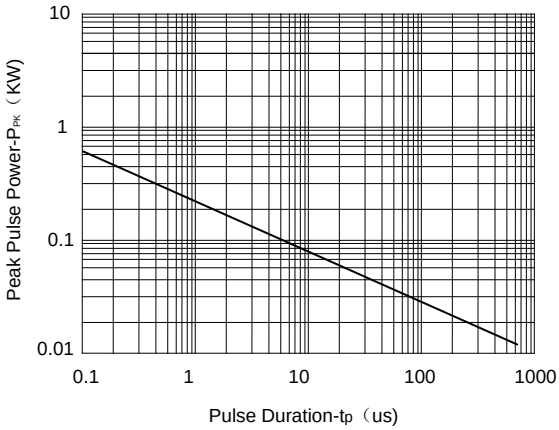
Symbol	Parameter
V_{RWM}	Working Peak Reverse Voltage
V_{BR}	Breakdown Voltage @ I_T
V_C	Clamping Voltage @ I_{PP}
I_T	Test Current
I_{RM}	Leakage current at V_{RWM}
I_{PP}	Peak pulse current
C_O	Off-state Capacitance
C_J	Junction Capacitance



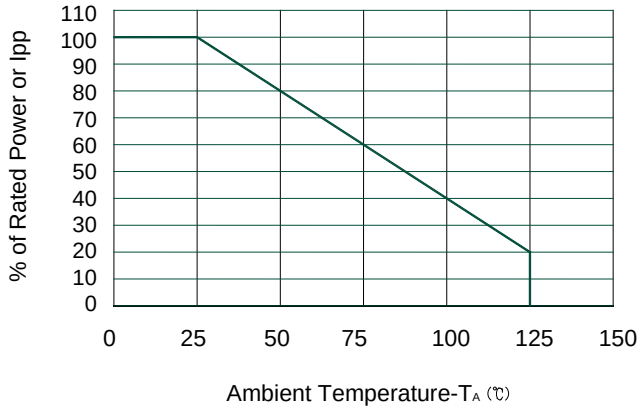
Typical electrical characterist applications



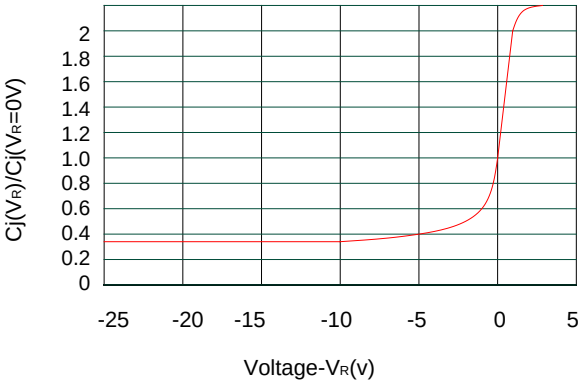
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

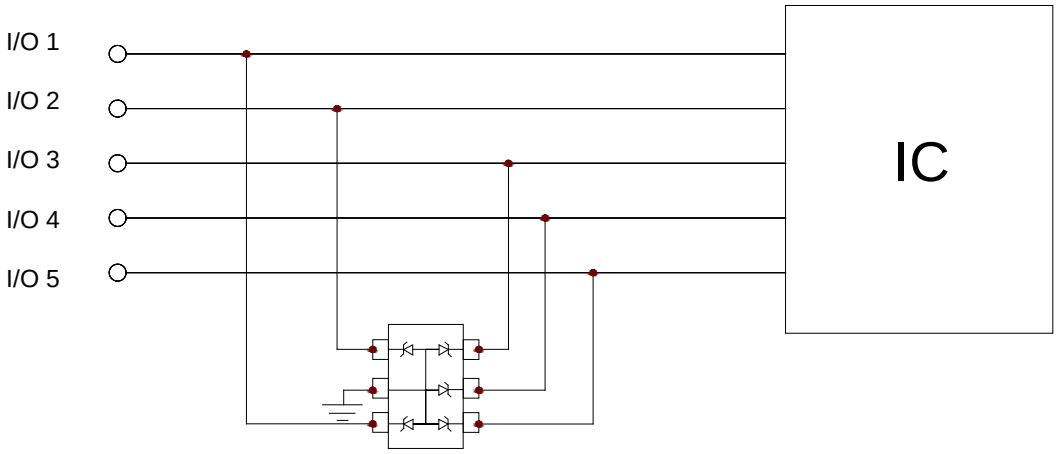


Power Derating Curve



Junction Capacitance vs. Reverse Voltage

Typical applications



Device Connection for Protection of Five Data Lines

The PESD5V0L5UY is designed to protect up to five unidirectional data lines. The device is connected as follows:

Unidirectional protection of five I/O lines is achieved by connecting pins 1, 3, 4, 5 and 6 to the data lines. Pin 2 is connected to ground. The ground connection should be made directly to the ground plane for best results. The path length is kept as short as possible to reduce the effects of parasitic inductance in the board traces.

Package information

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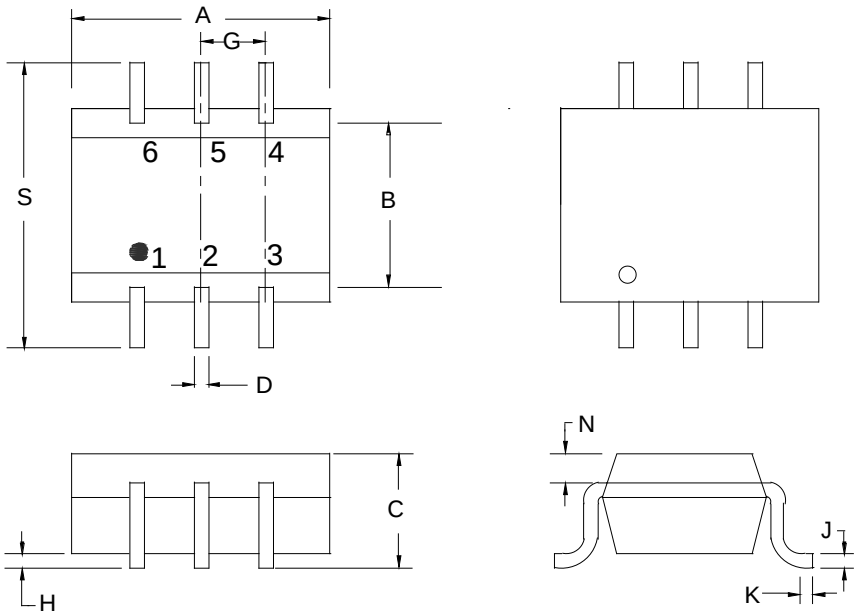

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.80	2.20	0.071	0.087
B	1.15	1.35	0.045	0.053
C	0.80	1.10	0.031	0.043
D	0.10	0.30	0.004	0.012
G	0.65BSC		0.026BSC	
H	--	0.10	--	0.004
J	0.10	0.25	0.004	0.010
K	0.10	0.30	0.004	0.012
N	0.20REF		0.008REF	
S	2.00	2.20	0.079	0.087