

DUAL ESD PROTECTION DIODES

STAND-OFF VOLTAGE - **5 Volts**
POWER DISSIPATION - **300 WATTS**

GENERAL DESCRIPTION

- The L30ESD5V0C3 is a dual voltage suppressor designed to protect components which are connected to data and transmission lines against Electro Static Discharge (ESD),
- It clamps the voltage just above the logic level supply for positive transients , and to a diode drop below ground for negative transients.
- It can work as bidirectional suppressor by connecting only pin 1 to 2.

FEATURES

- 2 Unidirectional ESD protection.
- Max. peak pulse power : Ppp = 300W at tp = 8/20 us
- Ultra low leakage current : IRM < 1uA @ VBR
- ESD protection > 25KV per MIL-STD-883C, Method 3015-6: Class 3.
- IEC 61000-4-2, level 4 (ESD),>15KV(air) ;>8KV(contact) .
- Ultra small SMD plastic packages

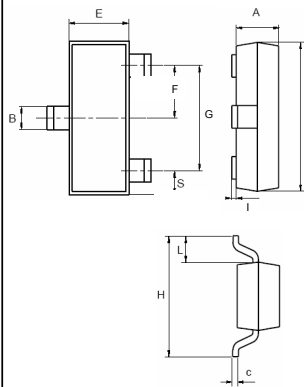
APPLICATION

- Computers and peripherals
- Communication system
- Portable electronics
- Cellular handsets and accessories.

MECHANICAL DATA

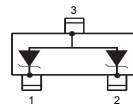
- Case Material: "Green" molding compound UL flammability classification 94V-0 (No Br.Sb, Cl)
- Terminals: Lead Free Plating (Matte Tin Finish)
- Component in accordance to RoHs 2002/95/EC
- Weight : 0.007 ounces, 0.21 gram

SOT23



SOT23		
DIM.	MIN.	MAX.
A	0.89	1.40
B	0.30	0.51
C	0.085	0.18
D	2.75	3.04
E	1.20	1.60
F	0.85	1.05
G	1.70	2.10
H	2.10	2.75
I	0.0	0.1
L	0.6 typ.	
S	0.35	0.65

All Dimensions in millimeter



PIN ASSIGNMENT	
1	Cathode
2	Cathode

MAXIMUM RATINGS (Tj= 25°C unless otherwise noticed)

Rating	Symbol	Value	Unit
Peak pulse Power (8/20us Waveform)	PPPM	300	W
Operating Junction Temperature Range	TJ	-55 to + 125	°C
Storage Temperature Range	Tstg	-55 to + 150	°C
Soldering Temperature, t max = 10s	TL	260	°C

ELECTRICAL CHARACTERISTICS (Tj= 25°C unless otherwise noticed)

Parameter	Symbol	Conditions	Min	Max	Unit
Reverse standoff voltage	VDRM	---	---	5	V
Reverse leakage current	IRM	VDRM = 5V	---	1	uA
Breakdown voltage	VBR	IR = 1 mA	6.4	7.2	V
Diode capacitance	CJ	VR = 0 V , f = 1MHz	---	160	pF
Clamping Voltage	VCL	Ipp= 15 A	---	20	V
Forward voltage drop	VF	IF = 200 mA		1.25	V

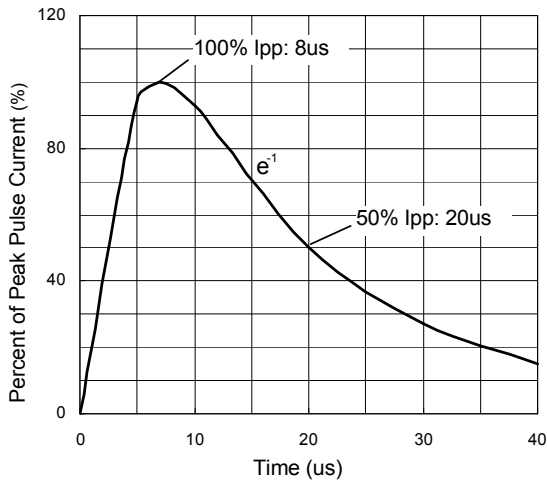


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

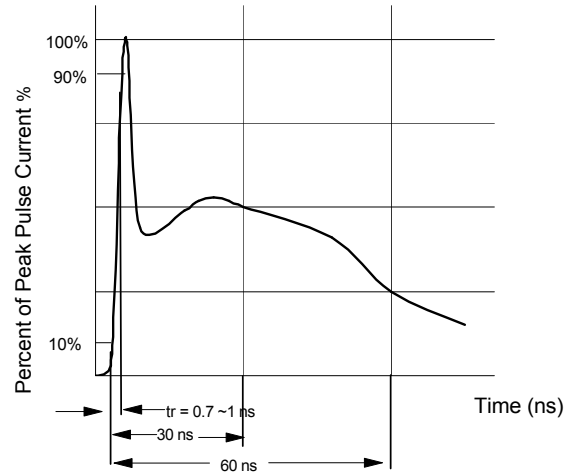


Figure 2. ESD pulse waveform according to IEC 61000-4-2

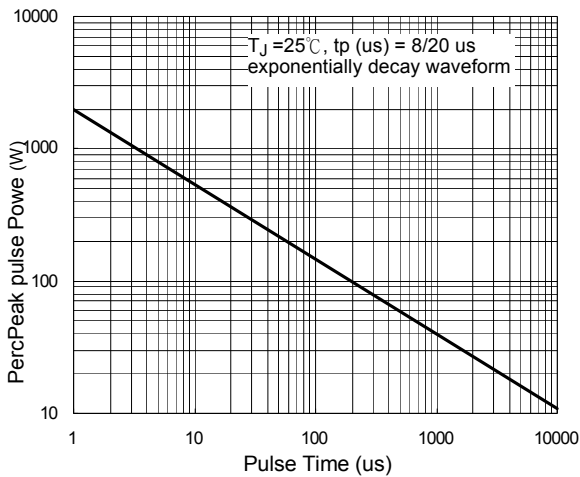


Figure 3. Power Dissipation versus Pulse Time

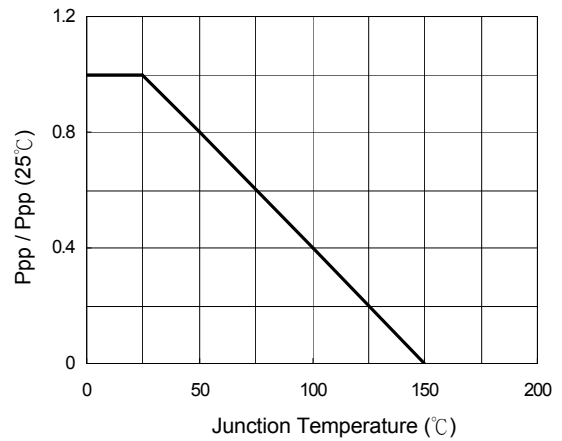


Figure 4. Peak pulse power versus TJ

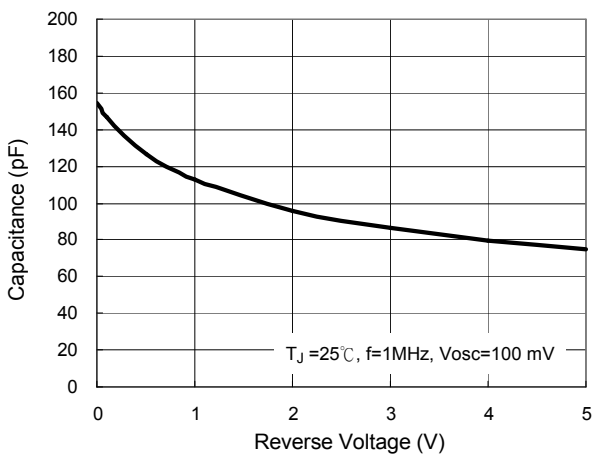


Figure 5. Typical Junction Capacitance

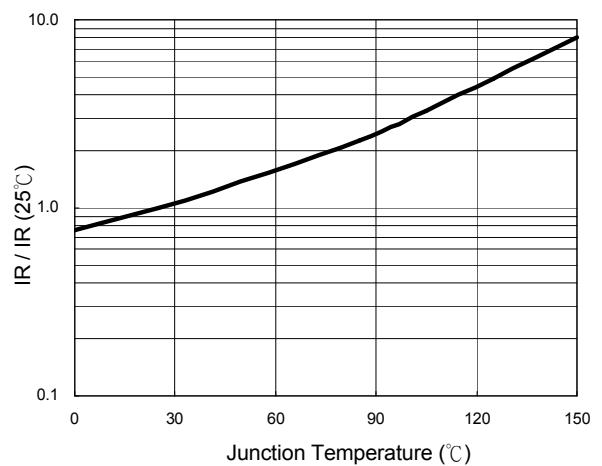


Figure 6. Reverse Leakage Current versus TJ