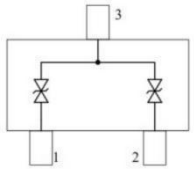
2-Line Bidirectional ESD Protection Diode SOT23

schematic & pin configuration

circuit diagraml	pinning
	PIN1 Lines 1 PIN2 Lines 2 PIN3 common pin

General description

These dual monolithic silicon surge protection diodes are designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD Sensitive equipment. as computers, printers, business machines, communication systems, medical equipment and other applications. Their bi-directional double ESD design protects two separate lines using only one package. These devices are ideal for situations where board space is at a premium.

Features and benefits

- Bi-directional ESD Protection of2 lines
- Reverse stand-off voltage: 15 .ov Max
- Low clamping voltage
- Low leakage current: nA Level
- Response time is typically < 1 ns
- ESD Protection: 20kv(air)/ 20kv(contact) (IEC61000-4-2)

Application information

- cell ular handsets and accessories
- portable electronics
- computers and peripherals
- communication systems
- Audio and video equipment.

ordering information

Device	package	packaging	Reel size
SM15C	SOT23	3000/Tape & Reel	7 inch

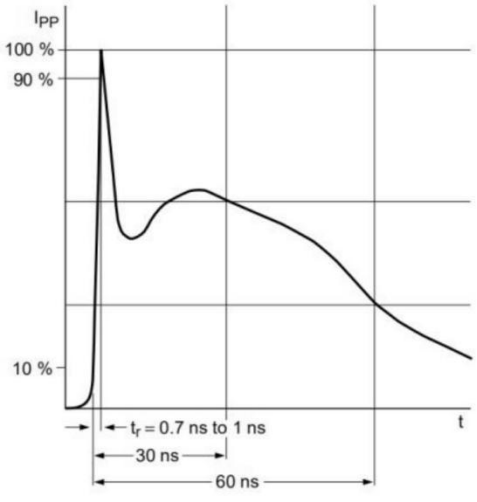
Maximum Ratings (Top = 25 C, unless otherwise specified)

parameter	symbol	value	unit
peak pulse power (tp = 8/20 μ S)	PPPM	135	W
peak pulse current(tp = 8/20 μ S)	I PPM	5	A
Maximum lead temperature for soldering during 10s	TL	260	°C
storage Temperature Range	Tstg	-55 to +150	°C
operating Temperature Range	Top	-40 to +125	°C
Maximum junction temperature	T_j	150	°C
ESD Voltage IEC 61000-4-2 (air discharge)	VESD	20	kv
ESD Voltage IEC 61000-4-2 (contact discharge)	VESD	20	kv

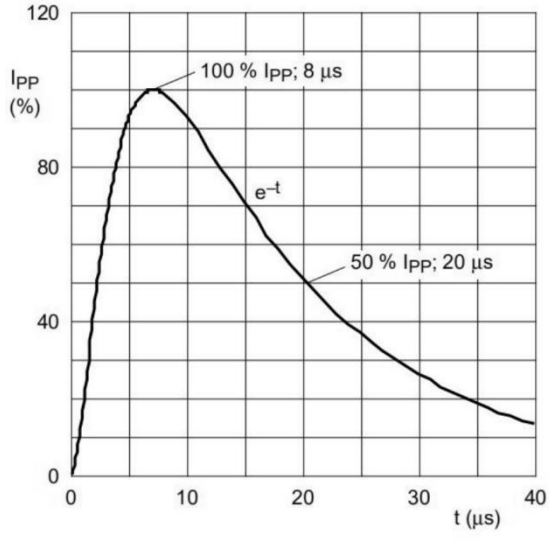
Electrical characteristics (Top = 25 °c, unless otherwise specified)

parameter	symbo	Min	TYp	Max	unit	condition
Reverse working voltage	VRWWM	--	--	15.0	V	
Breakdown voltage	VBR	16.5	18.5	20.0	V	IT= 1mA
Leakage current Leak	IR	--	--	100	nA	VRWM= 15V
clamping voltage	VC	--	25	27	V	Ipp=5A,TP=8/20μS
Junction capacitance	CJ	--	15	18	PF	VR=0V, f= 1MHz (pin 1 or 2 to 3)

Typical characteristics



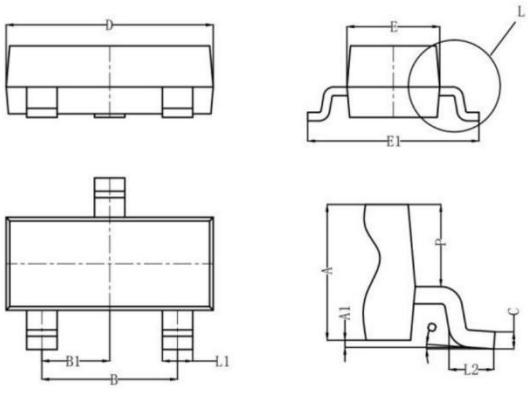
IEC61000-4-2waveform



IEC 61000-4-5waveform(8/20µs pulse)

package outline Dimensions

SOT23



symbol	Dimensions (mm)		
	Min	TYP	Max
A	0.900	1.000	1.1100
A1	0.000	0.050	0.100
L1	0.350	0.400	0.500
C	0.100	0.110	0.120
D	2.800	2.900	3.000
E	1.250	1.300	1.350
E1	2.250	2.400	2.550
B	1.800	1.900	2.000
B1	0.950 TYP		
L2	0.200	0.350	0.450
P	0.550	0.575	0.600