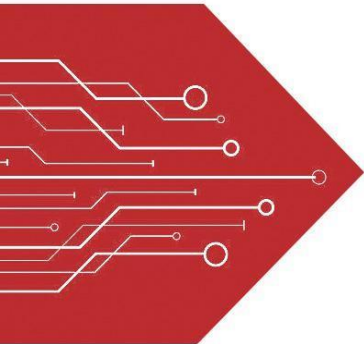


# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

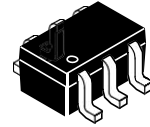


PLED

Product data sheet

### Applications

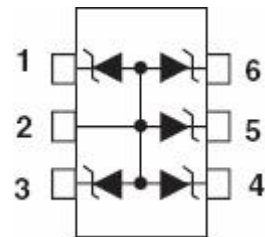
- Cellular handsets and accessories
- Portable electronics
- Computers and peripherals
- Communications systems
- Audio and video equipment.



SOT-363

### Features

- Uni-directional ESD protection of up to five lines
- Bi-directional ESD protection of up to four lines
- Low diode capacitance
- Low clamping voltage
- low leakage current
- IEC 61000-4-2; level 4 (ESD)
- IEC61000-4-5 (surge)
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



### Electrical Characteristics

P/N	V <sub>BR</sub>		V <sub>RM</sub>	I <sub>R</sub>	I <sub>PP</sub>	V <sub>CL</sub> (Max)		C f=1MHz; V <sub>R</sub> =0 V; see Fig.4 pF
	Min.	Max.				@ I <sub>PP</sub> =1A	@ I <sub>PP</sub> =5A	
	v	v	v	μ A	A	v	v	
SMF15CT1G	17	19	15	1	5	23	29	15

### Notes

1. Non-repetitive current pulse 8/20 μs exponentially decaying waveform; see Fig.1.
2. Measured from any of pins 1, 3, 4, 5 or 6 to pin 2.

### Absolute Ratings (T<sub>amb</sub>=25°C )

Symbol	Parameter	Value	Units
P <sub>PP</sub>	Peak Pulse Power (t <sub>p</sub> = 8/20μs)	150	W
T <sub>L</sub>	Maximum lead temperature for soldering during 10s	260	°C
T <sub>stg</sub>	Storage Temperature Range	-60 to +150	°C
T <sub>op</sub>	Operating Temperature Range	-60 to +150	°C
T <sub>j</sub>	Maximum junction temperature	150	°C
V <sub>PP</sub>	Electrostatic discharge IEC61000-4-2 (contact discharge)	8	kV
	IEC61000-4-2 (air discharge)	15	kV

**Electrical Parameter**

Symbol	Parameter
$V_{RM}$	Stand-off voltage
$V_{BR}$	Breakdown voltage
$V_{CL}$	Clamping voltage
$I_R$	Leakage current
$I_{PP}$	Peak pulse current
C	Capacitance

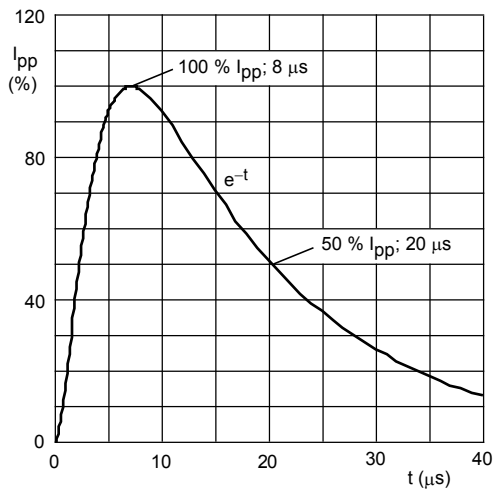
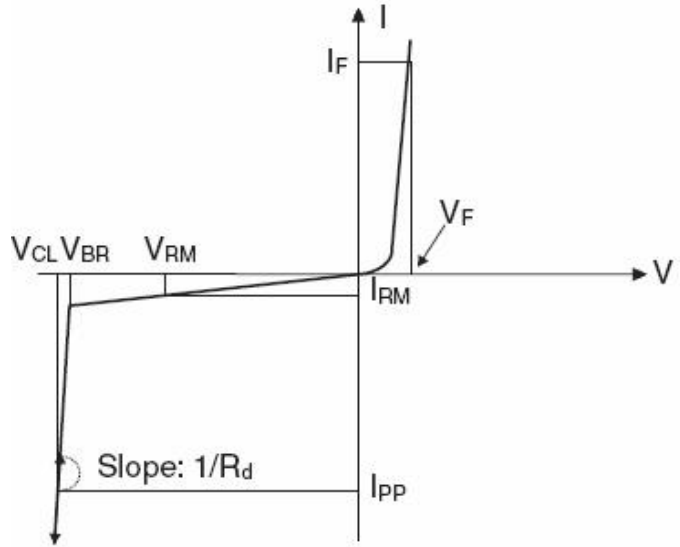


Fig.1 8/20 μs pulse waveform according to IEC 61000-4-5.

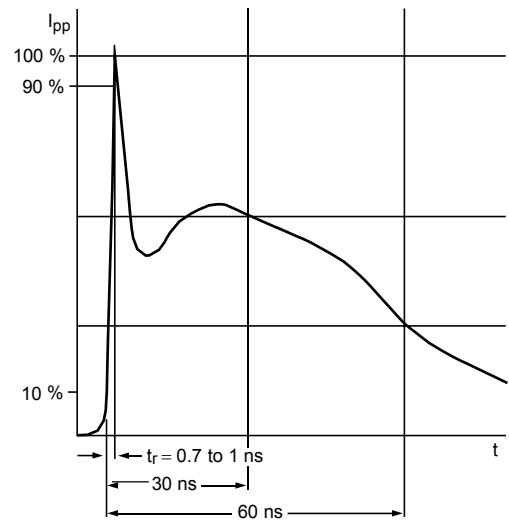
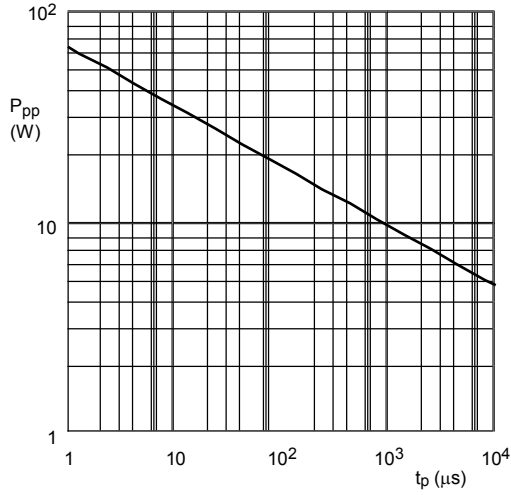


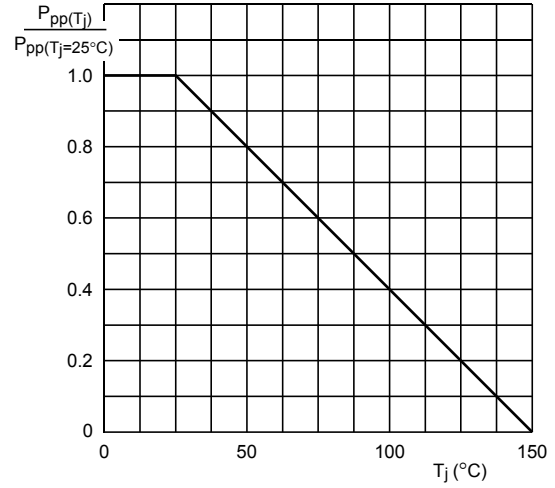
Fig.2 Electrostatic Discharge (ESD) pulse waveform according to IEC61000-4-2.

**GRAPHICAL DATA**

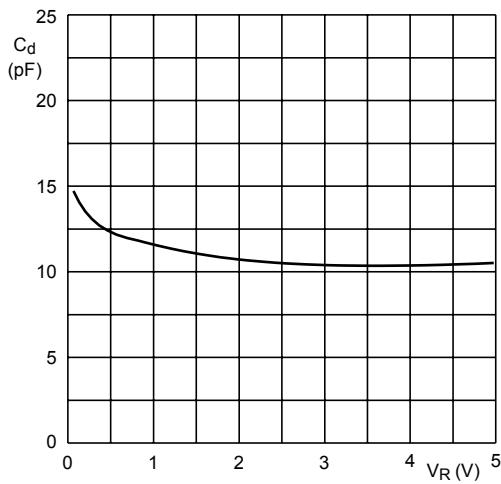


$T_{amb} = 25\text{ }^{\circ}\text{C}$ .  
 $I_{pp} = 8/20\text{ }\mu\text{s}$  exponentially decaying waveform; see Fig.1.

**Fig.3** Peak pulse power dissipation as a function of pulse time; typical values.

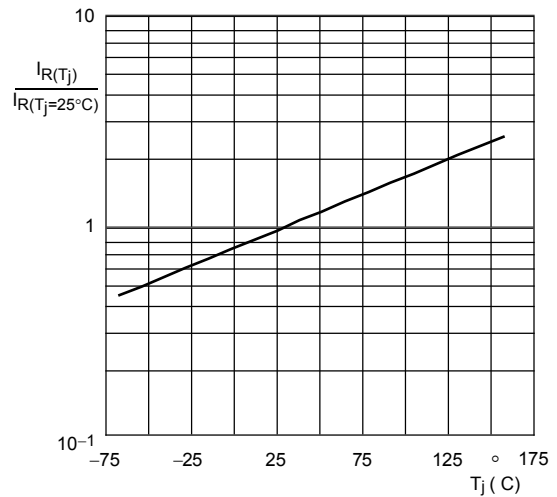


**Fig.4** Relative variation of peak pulse power as a function of junction temperature; typical values.



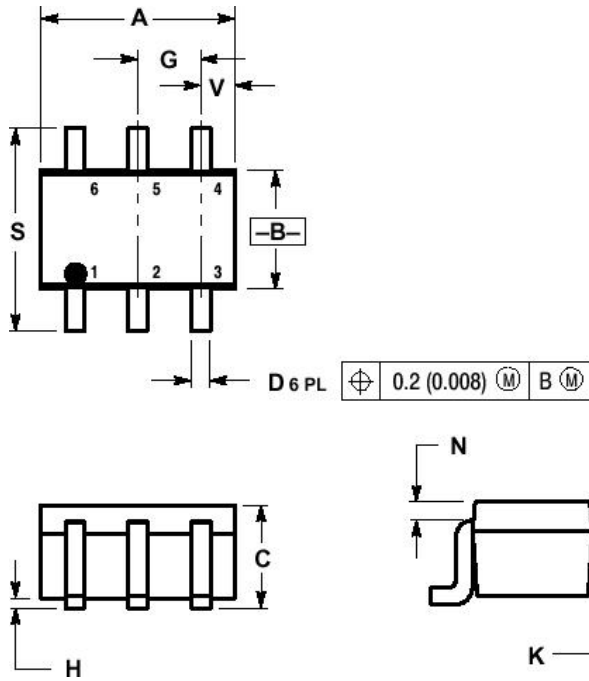
$f = 1\text{ MHz}$ ;  $T_{amb} = 25\text{ }^{\circ}\text{C}$ .

**Fig.5** Diode capacitance as a function of reverse voltage; typical values.



**Fig.6** Relative variation of reverse leakage current as a function of junction temperature; typical values.

## PACKAGE DIMENSIONS SOT-363



**NOTES:**

- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026BSC		0.65BSC	
H	—	0.004	—	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20
V	0.012	0.016	0.30	0.40

### REEL SPECIFICATION

P/N	PKG	QTY
SMF15CT1G	SOT-363	3000

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