

## Electro-static Discharge (ESD)

### SMF05C

#### Features

- 50 Watts Peak Pulse Power per line (tp=8/20μs)
- Up to Four(4) Lines of Protection
- Low operating and clamping voltage
- Low leakage current
- Response Time is Typically < 1ns



#### IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

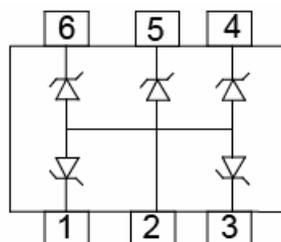
#### Mechanical Characteristics

- SOT-363 package
- Molding compound flammability rating:  
UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel
- RoHS/WEEE Compliant

#### Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

#### Schematic & PIN Configuration



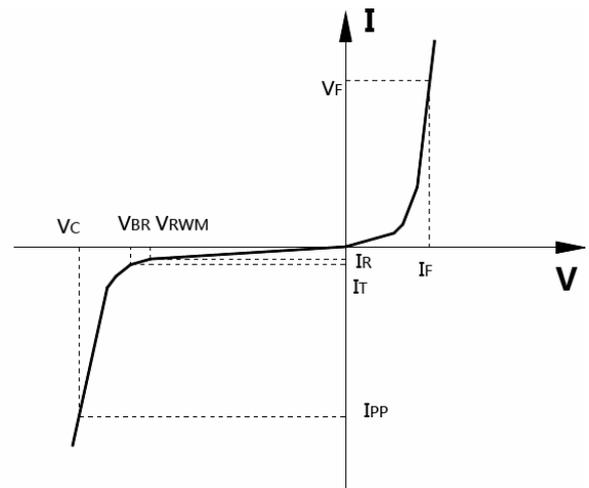
SOT-363

### Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P <sub>PPP</sub>	50	Watts
Peak Pulse Current(tp=8/20μs waveform)	I <sub>PP</sub>	2.5	A
ESD Rating per IEC61000-4-2:	Contact	8	KV
	Air	15	
Lead Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating Temperature Range	T <sub>J</sub>	-55 ~ 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ 150	°C

### Electrical Parameters (T=25°C)

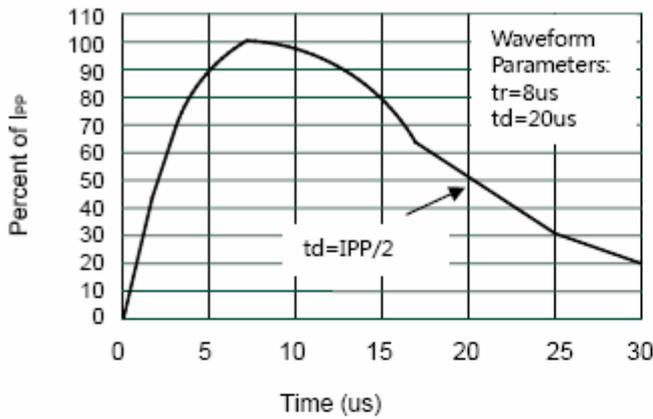
Symbol	Parameter
V <sub>RWM</sub>	Working Peak Reverse Voltage
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
I <sub>T</sub>	Test Current
I <sub>RM</sub>	Leakage current at V <sub>RWM</sub>
I <sub>PP</sub>	Peak pulse current
C <sub>O</sub>	Off-state Capacitance
C <sub>J</sub>	Junction Capacitance



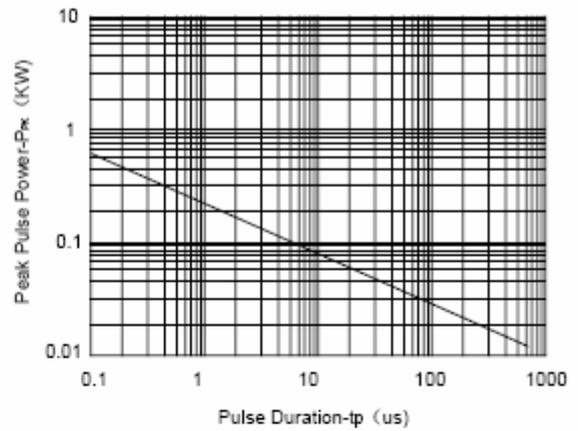
### Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V <sub>RWM</sub>	Reverse Working Voltage				5.0	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA,	6.0			V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 5V,			100	nA
V <sub>F</sub>	Diode Forward Voltage	I <sub>F</sub> = 15mA		0.85	1.2	V
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 1A, tp =8/20μs,			10	V
		I <sub>PP</sub> = 2.5A, tp =8/20μs,			13	V
I <sub>PP</sub>	Peak Pulse Current	tp =8/20μs			2.5	A
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz,		15	20	pF

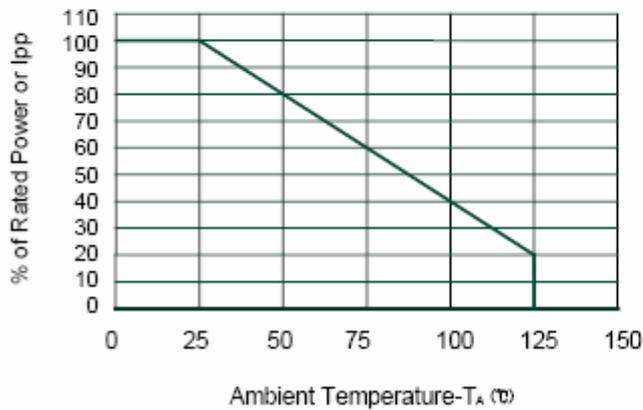
Typical Characteristics



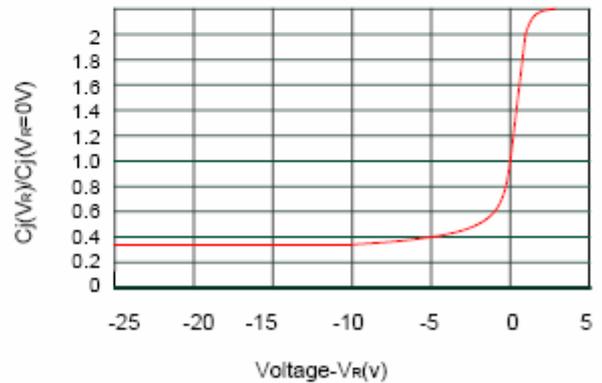
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



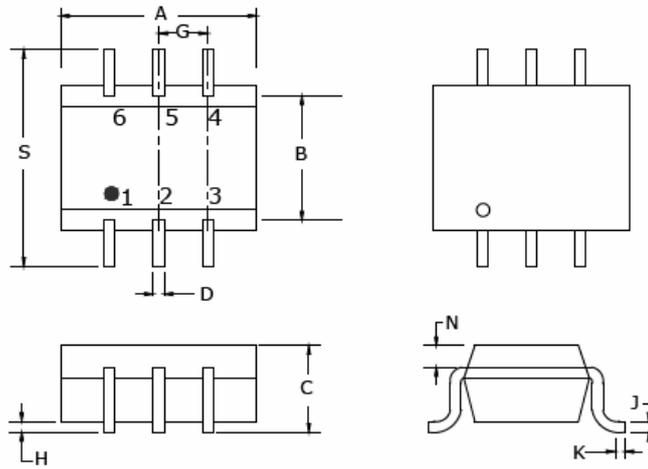
Power Derating Curve



Junction Capacitance vs. Reverse Voltage

Outline Drawing – SOT-363

SOT-363



SOT-363

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

Ordering Information

Device	Qty per Reel	Reel Size
SMF05C	3000	7inch