

Electro-static Discharge (ESD)

SMF05

Features

- 50 Watts Peak Pulse Power per line ($t_p=8/20\mu s$)
- 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) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

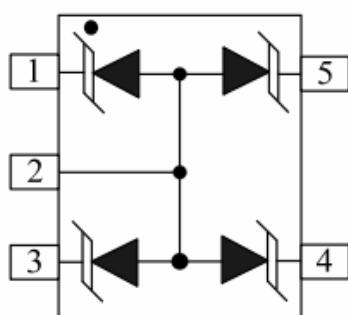
Mechanical Characteristics

- SOT-353 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-353



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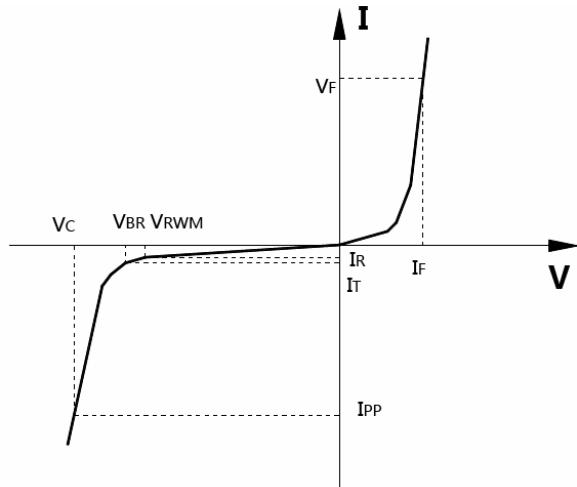
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Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PPP}	50	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.)	°C
Operating Temperature Range	T _J	-55 ~ 150	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C

Electrical Parameters (T=25°C)

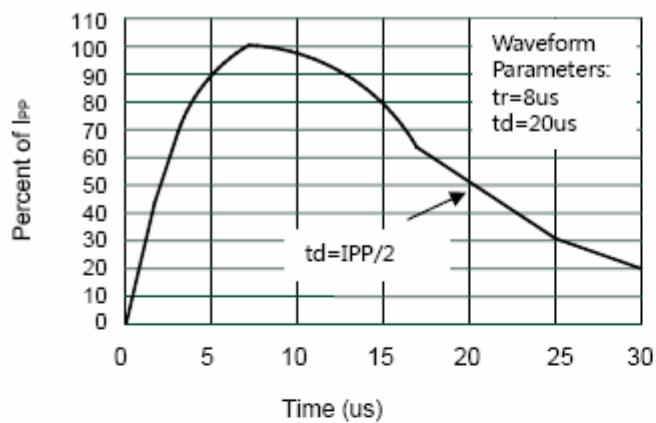
Symbol	Parameter
V _{RWM}	Working Peak Reverse Voltage
V _{BR}	Breakdown Voltage @ I _T
V _C	Clamping Voltage @ I _{PP}
I _T	Test Current
I _{RM}	Leakage current at V _{RWM}
I _{PP}	Peak pulse current
C _O	Off-state Capacitance
C _J	Junction Capacitance



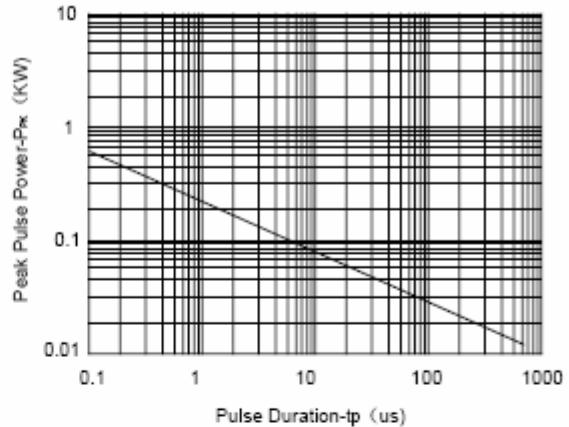
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V _{RWM}	Reverse Working Voltage				5.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 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} = 2.5A, 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

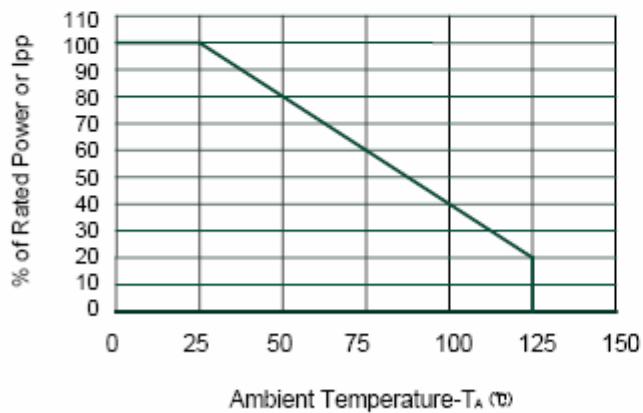
Typical Characteristics



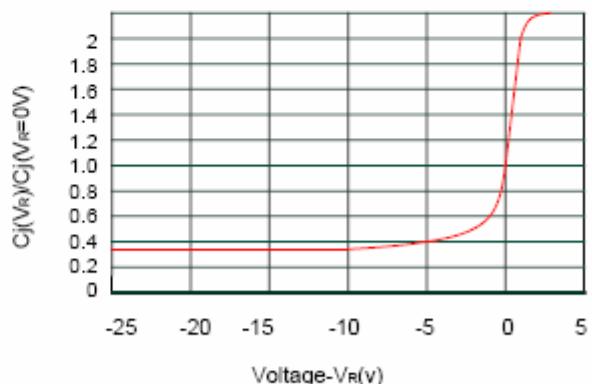
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



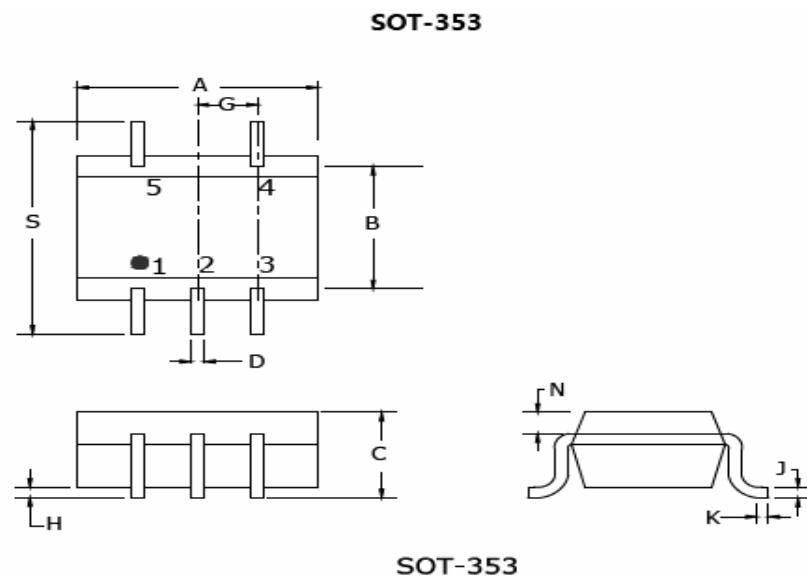
Junction Capacitance vs. Reverse Voltage



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Outline Drawing – SOT-353



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
SMF05	3000	7inch