

GENERAL DESCRIPTION

- The SMF05C is a low capacitance 5-fold ESD protection diode array in SOT363 package.

FEATURES

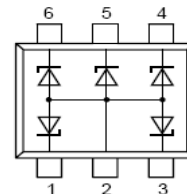
- Uni-directional ESD protection of five lines.
- Bi-directional ESD protection of up four lines.
- Max.peak pulse power : Ppp = 100W at tp = 8/20 us
- ESD protection > 25 KV
- IEC 61000-4-2, level 4 (ESD), > 15KV (air) ; > 8KV (contact).
- IEC 61000-4-5 (surge); Ipp = 2.5A at tp = 8/20 us.
- Low clamping voltage; Vcl < 12V at Ipp = 2.5A
- Low capacitance device.

APPLICATION

- Computers and peripherals.
- Communication system.
- Cellular handsets and accessories.
- Audio & video equipment.

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

SOT363


PIN ASSIGNMENT	
1	Cathode 1
2	Common Anode
3	Cathode 2
4	Cathode 3
5	Cathode 4
6	Cathode 5

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

Rating	Symbol	Value	Unit
Peak pulse Power (8/20us Waveform) , Notes (1,2)	PPPM	100	W
Operating Junction Temperature Range	TJ	-55 to + 150	°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	---	---	5.0	V
Reverse leakage current	IRM	VDRM = 5 V	---	25	nA
Breakdown voltage	VBR	IR = 1 mA	6.1	7.2	V
Diode capacitance	CJ	VR = 0 V , f = 1MHz	---	50	pF
Clamping voltage	VCL	Ipp = 1A	---	10	V
Clamping voltage	VCL	Ipp = 2.5A	---	12	V

NOTE:1. Non-repetitive current pulse 8/20 us exponentially decaying waveform.

2. Measured from any of pins 1,3,4,5 or 6 to pin2.

REV. 3, Oct-2010, KSIR11

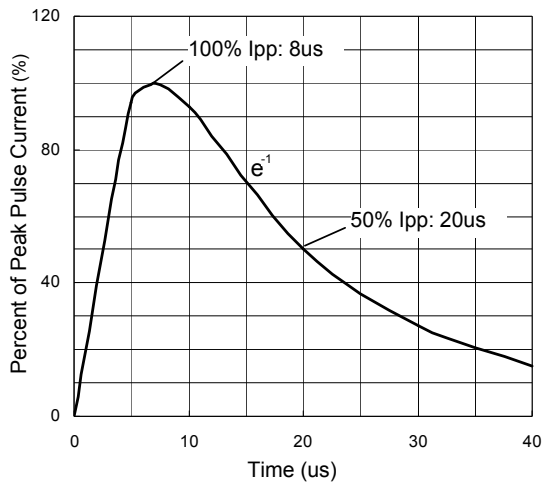


Figure 1. 8/20 us pulse waveform according to IEC 61000-4-5

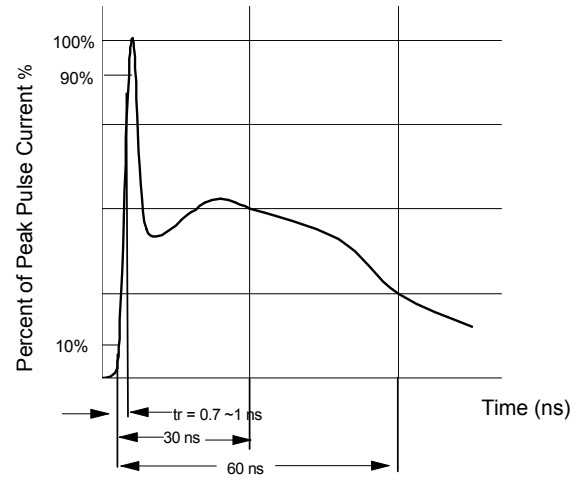


Figure 2. ESD pulse waveform according to IEC 61000-4-2

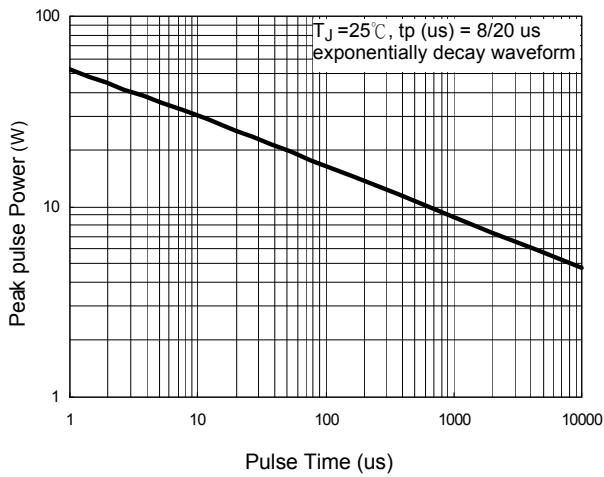


Figure 3. Power Dissipation versus Pulse Time

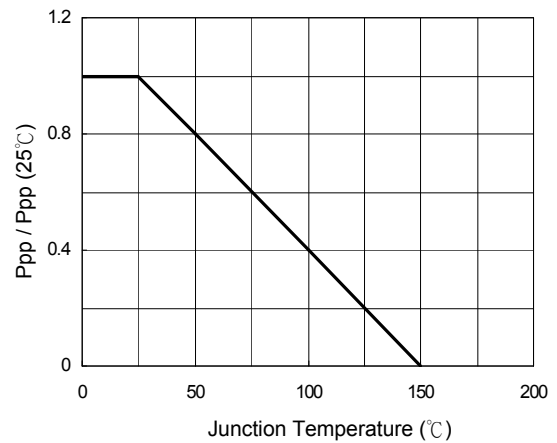


Figure 4. Peak pulse power versus TJ

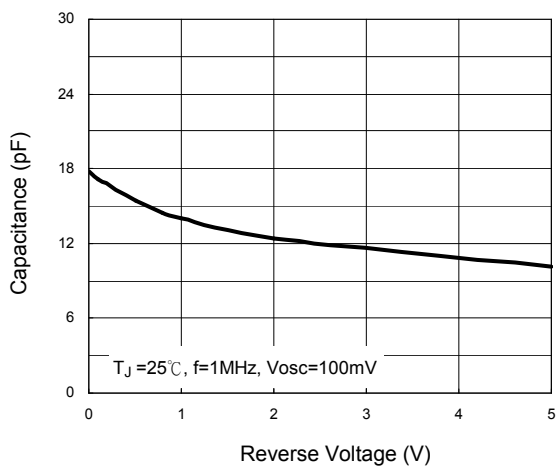


Figure 5. Typical Junction Capacitance

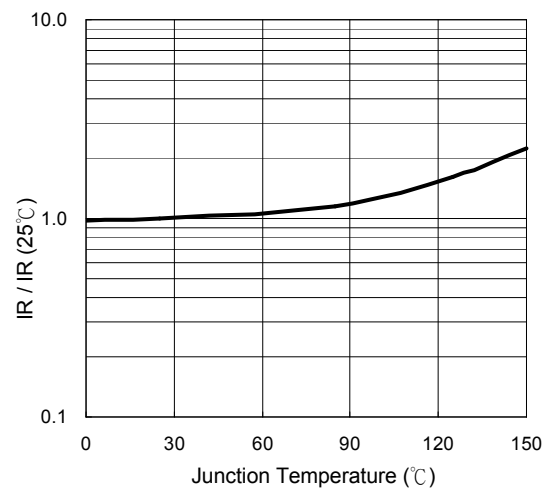


Figure 6. Reverse Leakage Current versus TJ

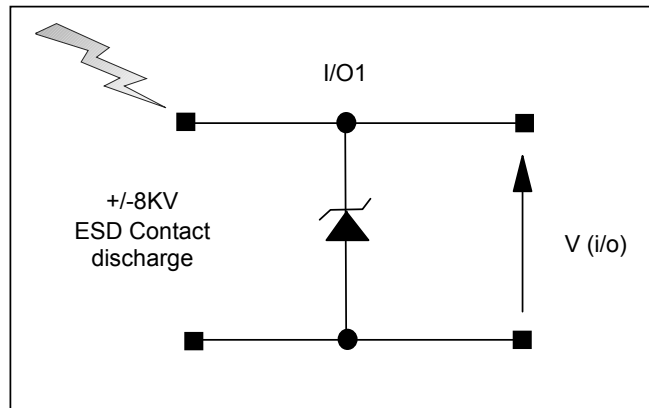


Figure 7. ESD Test Configuration

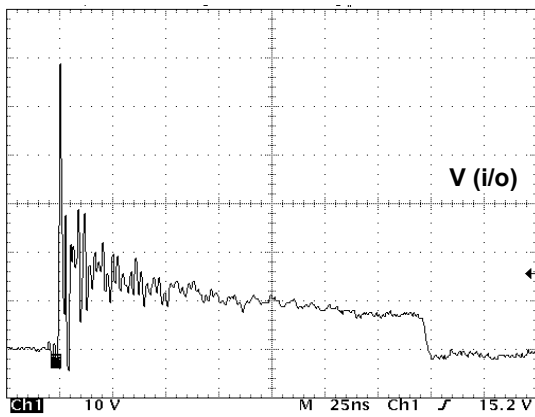


Figure 8. Clamped +8 kV ESD voltage waveform

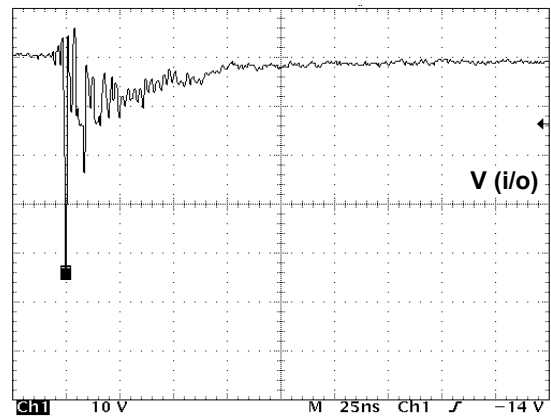
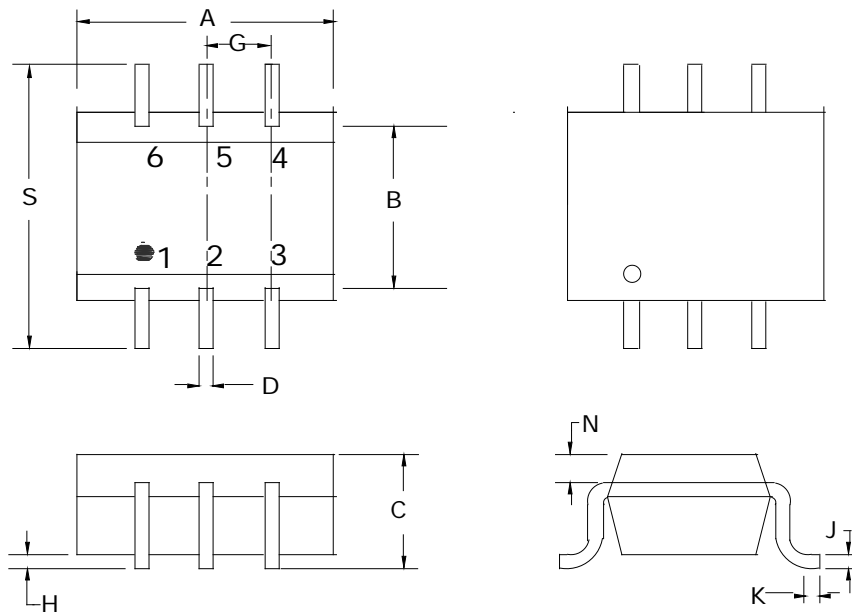


Figure 9. Clamped -8 kV ESD voltage waveform

Package information
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