

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

SMXX

Product specification

FEATURES

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (Contact)
- $\pm 30\text{kV}$ (Air)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- 350 Watts Peak Pulse Power per (tp=8/20 μs)
Protects one bidirectional line or two unidirectional lines
- unidirectional lines
- Low clamping voltage
- Working voltages: 3.3V to 36V
- Low leakage current

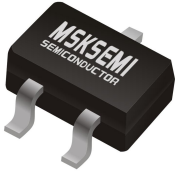
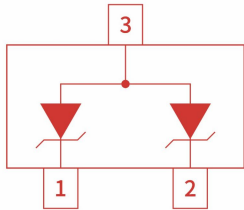
MACHANICAL DATA

- SOT-23 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed:
260C/10s
- Reel size: 7 inch
- MSL 1

APPLICATIONS

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports.
- Peripherals

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION
 <p>SOT-23</p>	

Marking for the SMXX series

VRWM	3.3V	5V	8V	12V	15V	18V	20V	24V	36V
Marking	M03	M05	M08	M12	M15	M18	M20	M24	M36

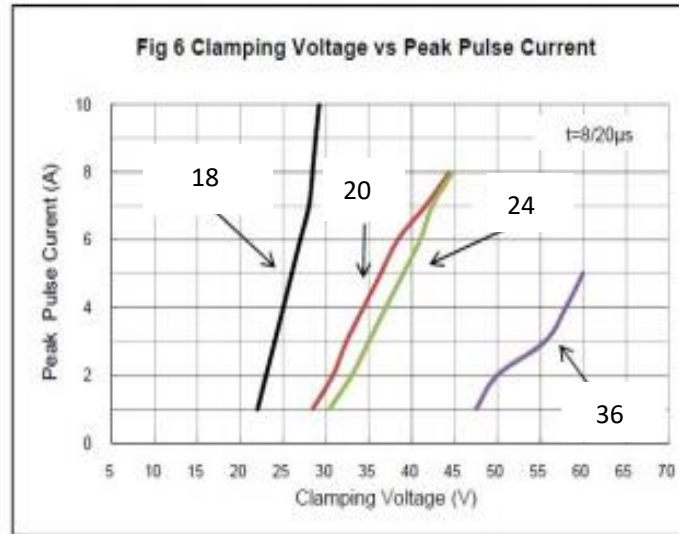
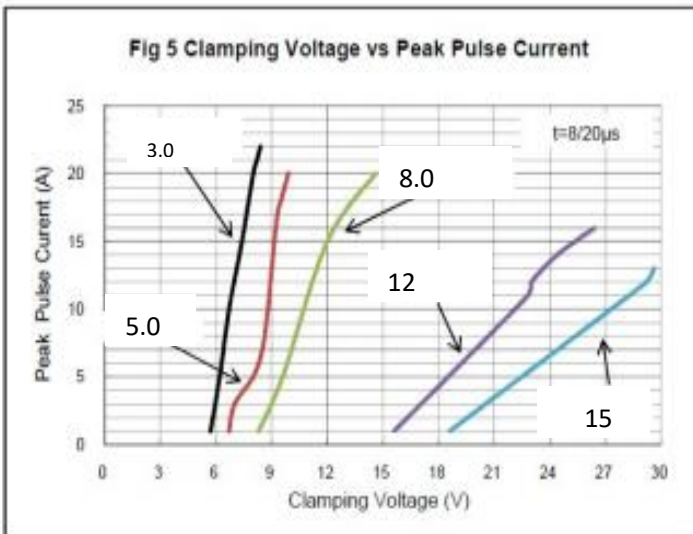
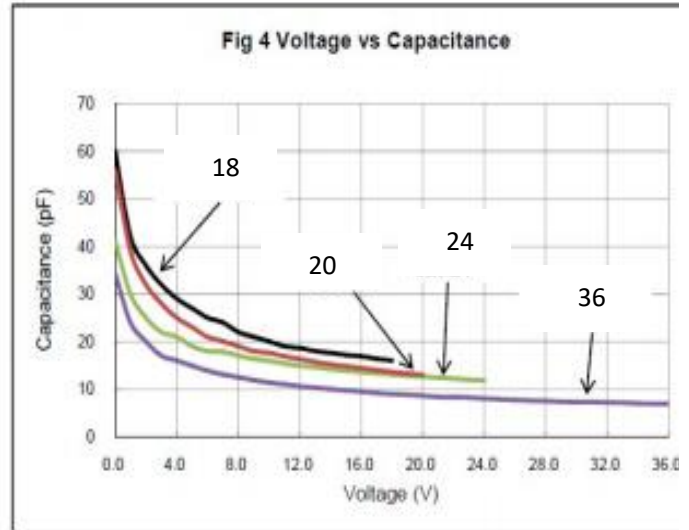
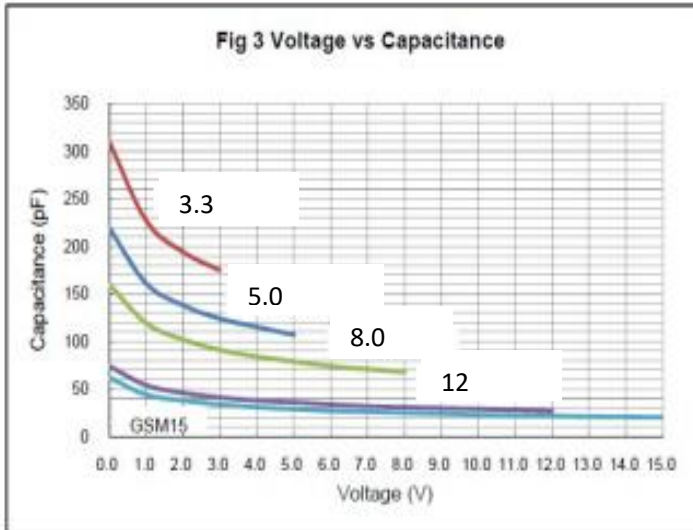
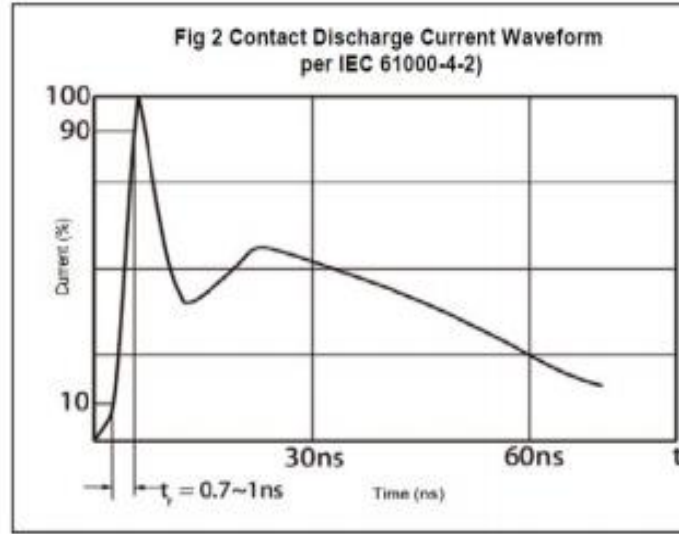
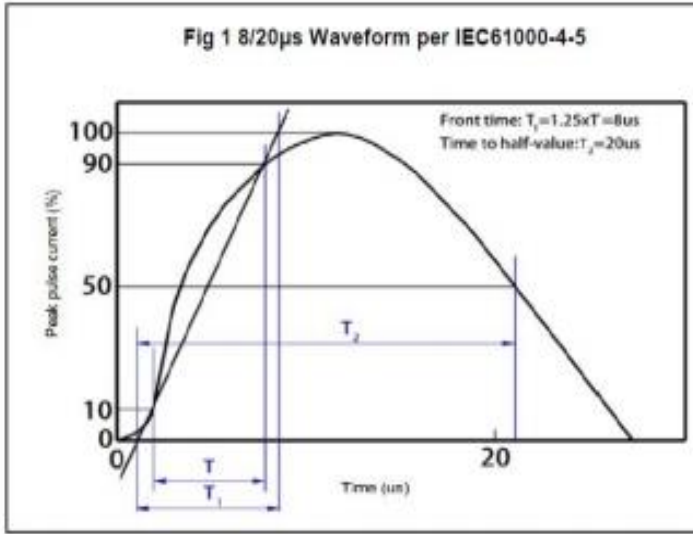
ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
VESD	ESD per IEC 61000-4-2 (Contact)	±30	kV
	ESD per IEC 61000-4-2 (Air)	±30	
PPP	Peak Pulse Power (8/20μs)	350	W
TOPT	Operating Temperature	-55~125	°C
TSTG	Storage Temperature	-55~150	°C
TL	Lead Soldering Temperature	260(10 sec)	°C

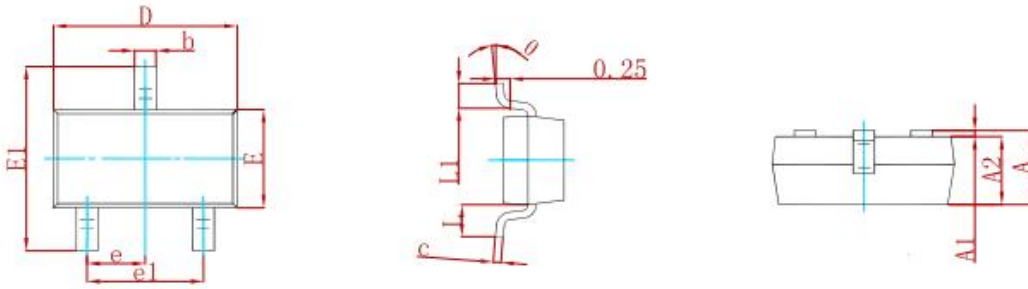
ELECTRICAL CHARACTERISTICS (Tamb=25 °C)

PART NUMBER	V RWM (V) (max.)	V B (V) (min.)	IT (mA)	VC @1 A (V) (max.)	VC (V)		IR (μA) (max.)	CT (pF) (max.)
					(max.)	(@A)		
SM03	3.3	4	1	7.0	14	20	40	450
SM05	5	6	1	9.8	18	17	10	300
SM08	8	8.5	1	13.4	24	15	2	240
SM12	12	13.3	1	19	32	11	1	130
SM15	15	16.7	1	24	38	10	1	120
SM18	18	20	1	29	45	9	1	100
SM20	20	22.3	1	35	50	8	1	90
SM24	24	26.7	1	43	52	7	1	80
SM36	36	40	1	60	75	5	1	60

ELECTRICAL CHARACTERISTICS CURVE

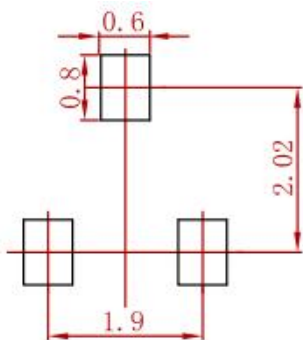


PACKAGE MECHANICAL DATA



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
 1. Controlling dimension: In millimeters.
 2. General tolerance: ± 0.05mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
SMXX	SOT-23	3000

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