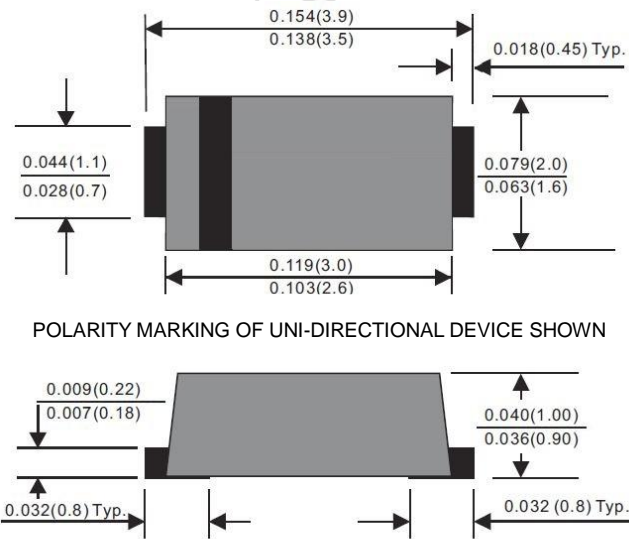


200W SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSORS, 5.0V – 170V

DIMENSIONS	PRODUCT FEATURES
 <p style="text-align: center;">POLARITY MARKING OF UNI-DIRECTIONAL DEVICE SHOWN</p> <p style="text-align: center;">Dimensions in inches and (millimeters)</p>	<ol style="list-style-type: none"> 1. FLAMMABILITY CLASSIFICATION 94V-0 2. LOW PROFILE DESIGN 3. IEC61000-4-2 ESD 15KV AIR, 8KV CONTACT COMPLIANCE 4. EXCELLENT CLAMPING CAPABILITY 5. FAST RESPONSE TIME 6. POLARITY: INDICATED BY CATHODE BAND 7. MOLDED PLASTIC CASE SOD-123S (MINI SMA) 8. DIMENSIONS IN INCHES AND (MILLIMETERS) 9. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026 10. WEIGHT: 0.0155 GRAMS 11. RoHS COMPLIANT. ADD "H" FOR HALOGEN FREE PART. <ul style="list-style-type: none"> i.e. SMF5.0A: RoHS COMPLIANT SMF5.0A-H: RoHS COMPLIANT AND HALOGEN FREE

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED)

PARAMETER	CONDITIONS	SYMBOL		UNIT
PEAK POWER DISSIPATION	WITH A 10/1000 μS WAVEFORM, SEE NOTE 1	P _{PPM}	200	W
PEAK PULSE DISSIPATION	WITH A 8/20 μS WAVEFORM, SEE NOTE 2	P _{PPM}	1000	W
STEADY STATE POWER DISSIPATION	AT TL=75°C (NOTE 3)	P _{M(AV)}	1.0	W
TYPICAL THERMAL RESISTANCE	JUNCTION TO AMBIENT	R _{θJA}	70	°C/W
TYPICAL THERMAL RESISTANCE	JUNCTION TO CASE	R _{θJC}	37	°C/W
TYPICAL THERMAL RESISTANCE	JUNCTION TO LEAD	R _{θJL}	26	°C/W
MAXIMUM INSTANTANEOUS FORWARD VOLTAGE	AT 12A FOR UNI-DIRECTIONAL TYPES ONLY	V _F	3.5	V
OPERATING JUNCTION TEMPERATURE RANGE		T _J	-55 TO +150	°C
STORAGE TEMPERATURE RANGE		T _{STG}	-65 TO +175	°C

Note : 1. Non-repetitive current pulse, per fig. 2 and derated above T_A=25°C per fig. 1

2. Non-repetitive current pulse, per fig. 3 and derated above T_A=25°C per fig. 1

3. Mounted on copper pad area of 0.2"x0.2" (5.0x5.0 mm) per Fig.6



SMF_ SERIES SPECIFICATION

Rev. A

Part No.	Reverse Stand-off Voltage	Breakdown Voltage @I _T		Test Current	Maximum Clamping Voltage @I _{PP}		Maximum Reverse Leakage Current	Marking Code	
	V _{RWM}	V _{BR} Min	V _{BR} Max	I _T	V _C	I _{PP}	I _R @V _{RWM}		
	Volts	Volts	Volts	mA	Volts	A	µA	UNI	BI
SMF5.0(C)A	5.0	6.40	7.00	10	9.2	21.7	400	KE	AE
SMF6.0(C)A	6.0	6.67	7.37	10	10.3	19.4	400	KG	AG
SMF6.5(C)A	6.5	7.22	7.98	10	11.2	17.9	250	KK	AK
SMF7.0(C)A	7.0	7.78	8.60	10	12.0	16.7	100	KM	AM
SMF7.5(C)A	7.5	8.33	9.21	1.0	12.9	15.5	50	KP	AP
SMF8.0(C)A	8.0	8.89	9.83	1.0	13.6	14.7	25	KR	AR
SMF8.5(C)A	8.5	9.44	10.4	1.0	14.4	13.9	10	KT	AT
SMF9.0(C)A	9.0	10.0	11.1	1.0	15.4	13.0	5.0	KV	AV
SMF10(C)A	10	11.1	12.3	1.0	17.0	11.8	2.5	KX	AX
SMF11(C)A	11	12.2	13.5	1.0	18.2	11.0	2.5	KZ	AZ
SMF12(C)A	12	13.3	14.7	1.0	19.9	10.1	2.5	LE	BE
SMF13(C)A	13	14.4	15.9	1.0	21.5	9.3	1	LG	BG
SMF14(C)A	14	15.6	17.2	1.0	23.2	8.6	1	LK	BK
SMF15(C)A	15	16.7	18.5	1.0	24.4	8.2	1	LM	BM
SMF16(C)A	16	17.8	19.7	1.0	26.0	7.7	1	LP	BP
SMF17(C)A	17	18.9	20.9	1.0	27.6	7.2	1	LR	BR
SMF18(C)A	18	20.0	22.1	1.0	29.2	6.8	1	LT	BT
SMF20(C)A	20	22.2	24.5	1.0	32.4	6.2	1	LV	BV
SMF 22(C)A	22	24.4	26.9	1.0	35.5	5.6	1	LX	BX
SMF24(C)A	24	26.7	29.5	1.0	38.9	5.1	1	LZ	BZ
SMF26(C)A	26	28.9	31.9	1.0	42.1	4.8	1	ME	CE
SMF28(C)A	28	31.1	34.4	1.0	45.4	4.4	1	MG	CG
SMF30(C)A	30	33.3	36.8	1.0	48.4	4.1	1	MK	CK
SMF33(C)A	33	36.7	40.6	1.0	53.3	3.8	1	MM	CM
SMF36(C)A	36	40.0	44.2	1.0	58.1	3.4	1	MP	CP
SMF40(C)A	40	44.4	49.1	1.0	64.5	3.1	1	MR	CR
SMF43(C)A	43	47.8	52.8	1.0	69.4	2.9	1	MT	CT
SMF45(C)A	45	50.0	55.3	1.0	72.7	2.8	1	MV	CV
SMF48(C)A	48	53.3	58.9	1.0	77.4	2.6	1	MX	CX
SMF51(C)A	51	56.7	62.7	1.0	82.4	2.4	1	MZ	CZ
SMF54(C)A	54	60.0	66.3	1.0	87.1	2.3	1	NE	DE
SMF58(C)A	58	64.4	71.2	1.0	93.6	2.2	1	NG	DG
SMF60(C)A	60	66.7	73.7	1.0	96.8	2.1	1	NK	DK
SMF64(C)A	64	71.1	78.6	1.0	103.0	2.0	1	NM	DM
SMF70(C)A	70	77.8	86.0	1.0	113.0	1.8	1	NP	DP
SMF75(C)A	75	83.3	92.1	1.0	121.0	1.7	1	NR	DR
SMF78(C)A	78	86.7	95.8	1.0	126.0	1.6	1	NT	DT
SMF85(C)A	85	94.4	104.0	1.0	137.0	1.5	1	NV	DV



Part No.	Reverse Stand-off Voltage	Breakdown Voltage @ I_T		Test Current	Maximum Clamping Voltage @ I_{PP}		Maximum Reverse Leakage Current	Marking Code	
	V_{RWM}	V_{BR} Min	V_{BR} Max	I_T	V_C	I_{PP}	$I_R @ V_{RWM}$		
	Volts	Volts	Volts	mA	Volts	A	μA	UNI	BI
SMF90(C)A	90	100.0	111.0	1.0	146.0	1.4	1	NX	DX
SMF100(C)A	100	111.0	123.0	1.0	162.0	1.3	1	NZ	DZ
SMF110(C)A	110	122.0	135.0	1.0	177.0	1.2	1	PE	EE
SMF120(C)A	120	133.0	147.0	1.0	193.0	1.1	1	PG	EG
SMF130(C)A	130	144.0	159.0	1.0	209.0	1.0	1	PK	EK
SMF150(C)A	150	167.0	185.0	1.0	243.0	0.8	1	PM	EM
SMF160(C)A	160	178.0	197.0	1.0	259.0	0.8	1	PP	EP
SMF170(C)A	170	189.0	209.0	1.0	275.0	0.8	1	PR	ER

- Note 1. V_{BR} measured after I_T applied for 300us, I_T =square wave pulse or equivalent
 2. Surge current waveform per Fig. 3 and derated per Fig. 2
 3. For bi-directional types having V_{RWM} of 10 volts and less, the I_R limit is doubled
 4. Suffix 'C' denotes bi-directional devices. Suffix 'A' denotes 5% tolerance devices, no suffix denotes 10% tolerance devices.
 5. All terms and symbols are consistent with ANS/IEEE C62.35

RATINGS AND CHARACTERISTIC CURVES

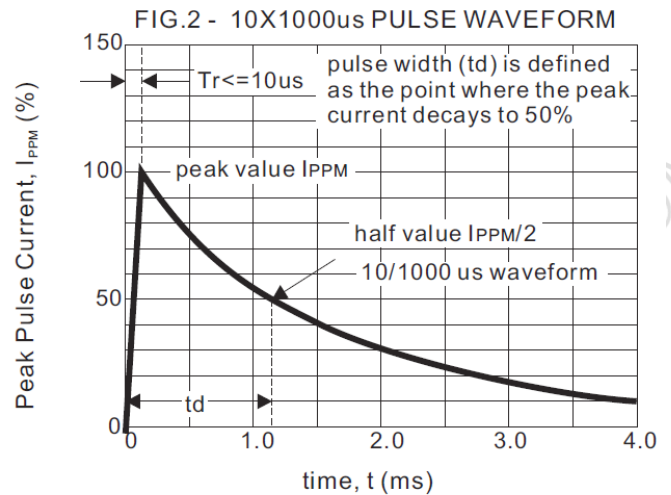
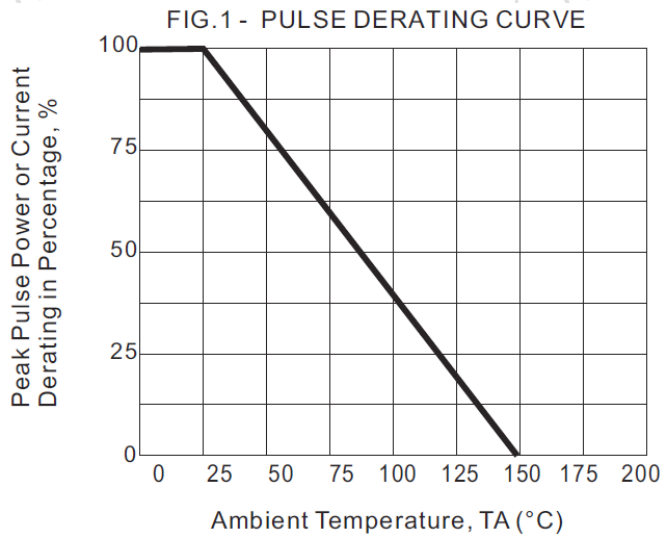




FIG.3 - 8X20us PULSE WAVEFORM

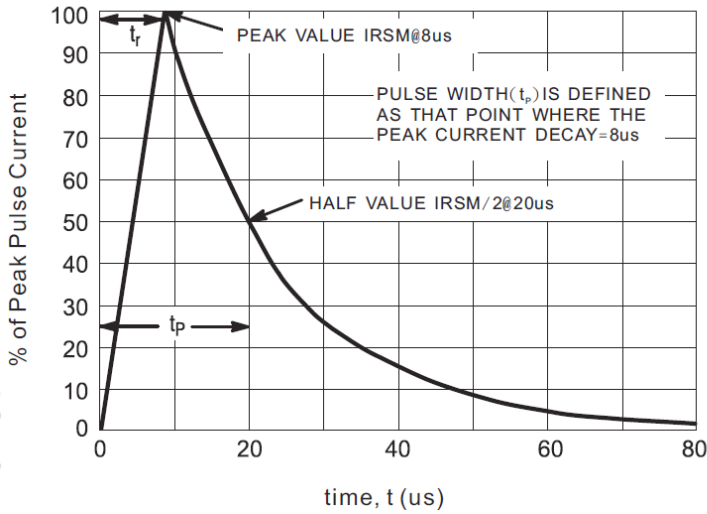


FIG.4 - PEAK PULSE POWER RATING CURVE

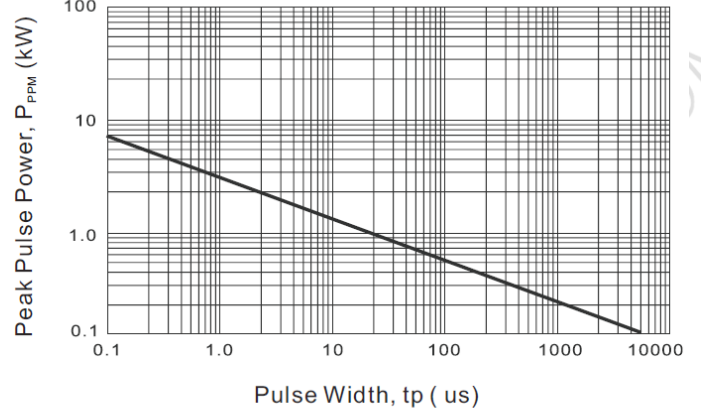


FIG.5 - TYPICAL JUNCTION CAPACITANCE

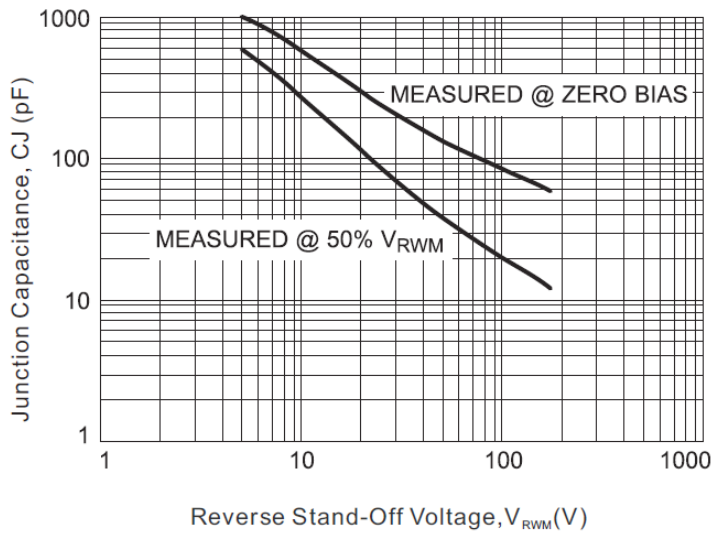


FIG.6 - Steady State Power Derating Curve

