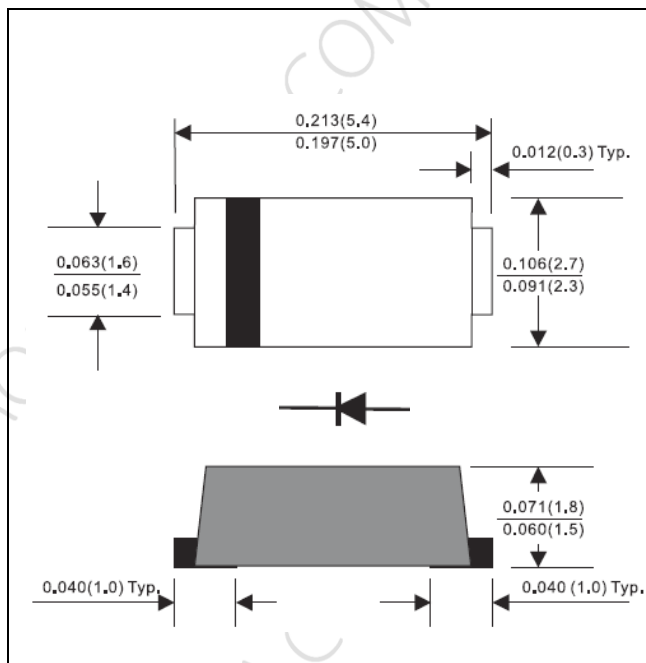




1A SMD SUPER FAST RECTIFIERS, 50V-600V



PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. EXCELLENT REVERSE LEAKAGE CURRENT AND THERMAL RESISTANCE
3. HIGH CURRENT CAPABILITY, LOW POWER LOSS
4. SILICON EPITAXIAL PLANAR CHIP, METAL SILICON JUNCTION
5. GUARDRING FOR OVERVOLTAGE PROTECTION
6. CASE: TRANSFER MOLDED, DO-214AC (SMA-S)
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
9. WEIGHT: 0.05 GRAMS
10. RoHS COMPLIANT, ADD SUFFIX "H" FOR HALOGEN FREE
i.e. SFM11-S-H: RoHS COMPLIANT/HALOGEN FREE

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL		UNITS
MAXIMUM FORWARD RECTIFIED CURRENT	I_O	1	A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	30	A
TYPICAL JUNCTION CAPACITANCE BETWEEN TERMINALS (NOTE 1)	C_J	10	pF
STORAGE TEMPERATURE RANGE	T_{STG}	- 65 TO +175	$^\circ\text{C}$
OPERATING JUNCTION TEMPERATURE RANGE	T_J	- 55 TO +150	$^\circ\text{C}$
MAX. DC REVERSE CURRENT AT RATED DC BLOCKING VOLTAGE $T_J = 25^\circ\text{C}$	I_R	5	μA
MAX. DC REVERSE CURRENT AT RATED DC BLOCKING VOLTAGE $T_J = 125^\circ\text{C}$	I_{R125}	1100	μA
MAX. REVERSE RECOVERY TIME, $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$	T_{RR}	35	nS

PART NUMBER	MAX RECURRENT PK REVERSE VOLTAGE/DC BLOCKING V_{RRM}/V_R (V)	MAX V_{RMS} (V)	TYPICAL FORWARD VOLTAGE AT $I_F = 1\text{A}$ V_F (V)	MARKING
SFM11-S	50	35	0.95	S11
SFM12-S	100	70	0.95	S12
SFM13-S	150	105	0.95	S13
SFM14-S	200	140	0.95	S14
SFM15-S	300	210	1.25	S15
SFM16-S	400	280	1.25	S16
SFM17-S	500	350	1.70	S17
SFM18-S	600	420	1.70	S18

NOTE : 1. MEASURE AT 1MHz WITH 4VDC REVERSE VOLTAGE APPLIED .

2. CURRENT RATING IS BASED ON SINGLE PHASE, 1/2 WAVE, 60HZ, RESISTIVE, OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD,



DERATE CURRENT BY 20%.

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

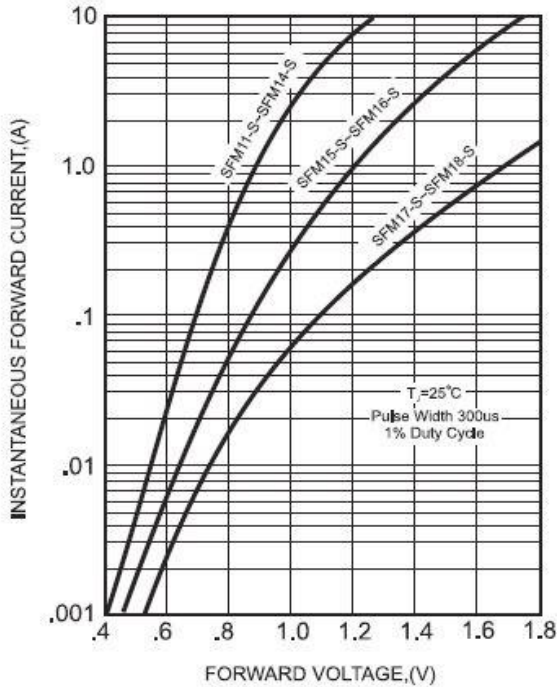


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

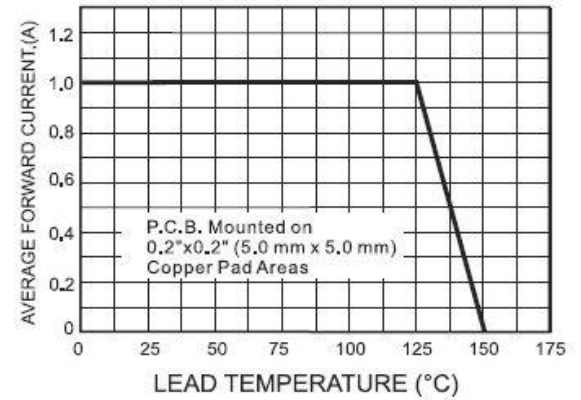


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

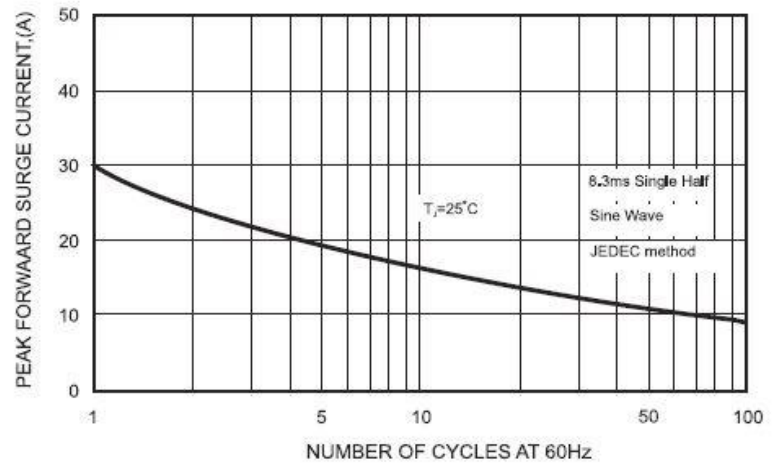
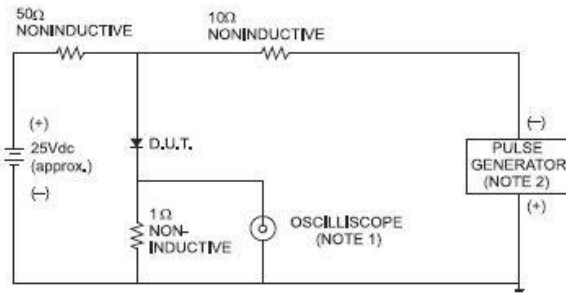


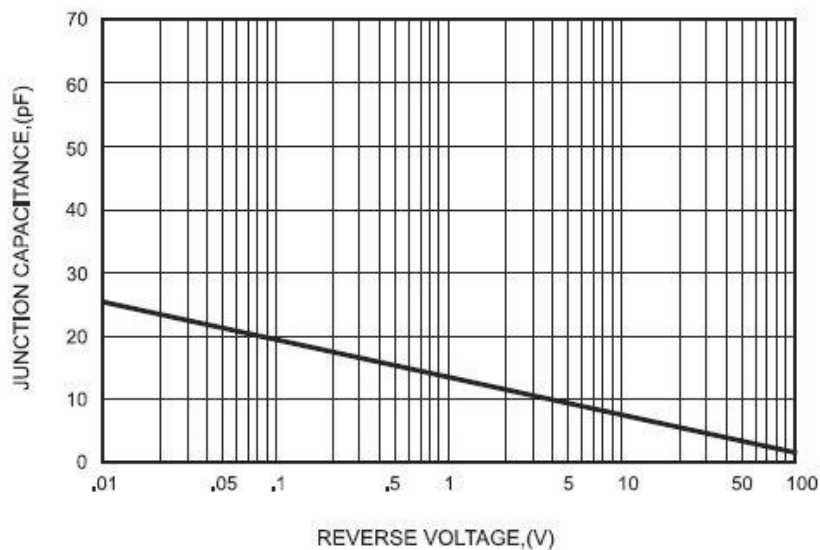
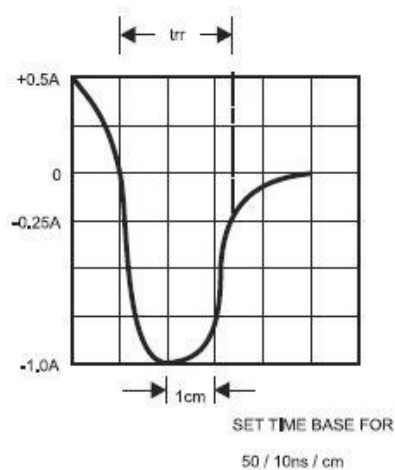
FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



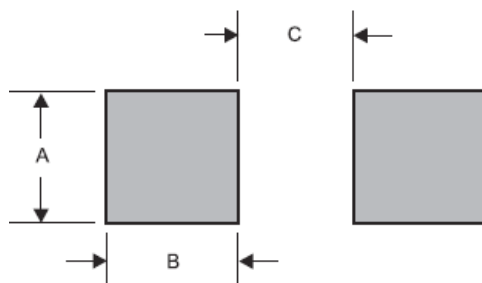
NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

FIG.5-TYPICAL JUNCTION CAPACITANCE



LAYOUT RECOMMENDATION



PACKAGE	A	B	C
SMA-S	0.063 (1.60)	0.059 (1.50)	0.110 (2.80)