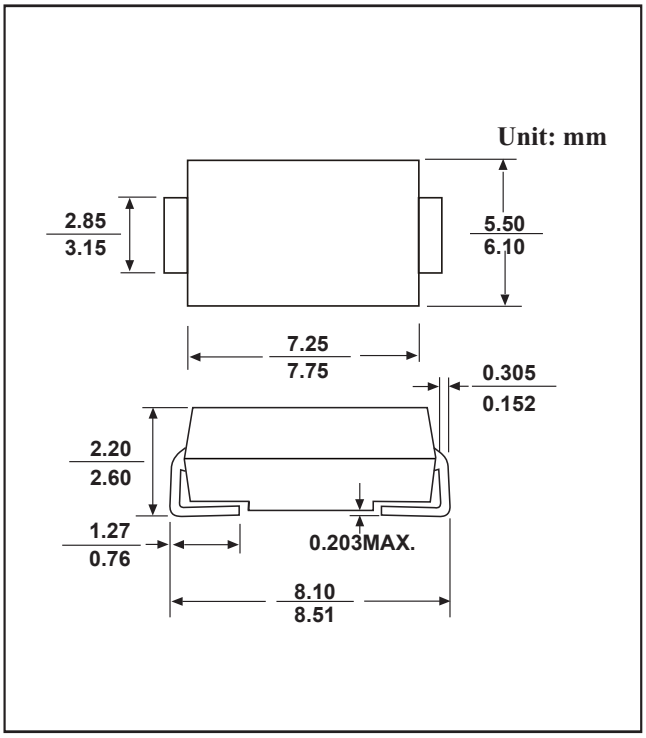
SMC PLASTIC SILICON RECTIFIERS

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing
- Metal silicon junction ,majority carrier conduction
- Built-in strain relief
- For surface mounted applications
- Low power loss ,high efficiency,High surge capability
- High current capability ,Low forward voltage drop
- For use in low voltage ,high frequency inverters, free wheeling and polarity protection applications
- High temperature soldering guaranteed:260 ℃/10 seconds at terminals
- Component in accordance to RoHS 2015/863 and WEEE 2012/19/EU

MECHANICAL DATA

- Case: SMC molded plastic body
- Terminals:Lead solderable per MIL-STD-750,method 2026
- Polarity:Color band denotes cathode end



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

	Symbols	SS 52	SS 53	SS 54	SS 55	SS 56	SS 58	SS 510	SS 515	SS 520	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	57	71	105	140	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{(AV)}$	5.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	I_{FSM}	150.0									Amps
Maximum instantaneous forward voltage at 5.0 A(Note 1)	V_F	0.55			0.70		0.85		0.90	0. 95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A=25℃	I_R	0.2									mA
T_A=100℃		50			10						
Typical junction capacitance(Note 3)	C_J	500			400						PF
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	55.0 17.0									℃/W
Operating junction temperature range	T_J	-65 to+150									℃
Storage temperature range	T_{STG}	-65 to+150									℃

Notes: 1. Pulse test: 300 μs pulse width,1% duty cycle

2. P.C.B. mounted 0.55X0.55"(14X14mm) copper pad areas

3. Measured at 1MHz and reverse voltage of 4.0 volts

RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

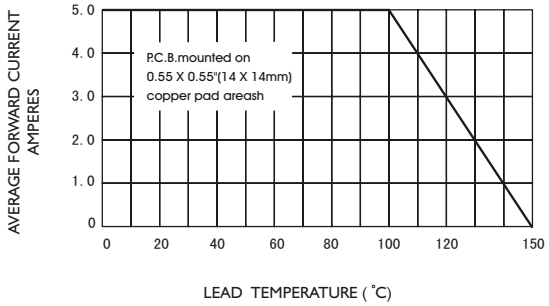


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

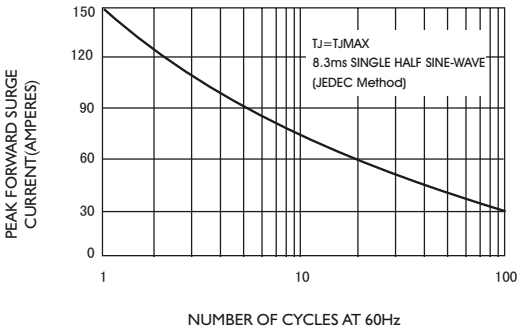


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

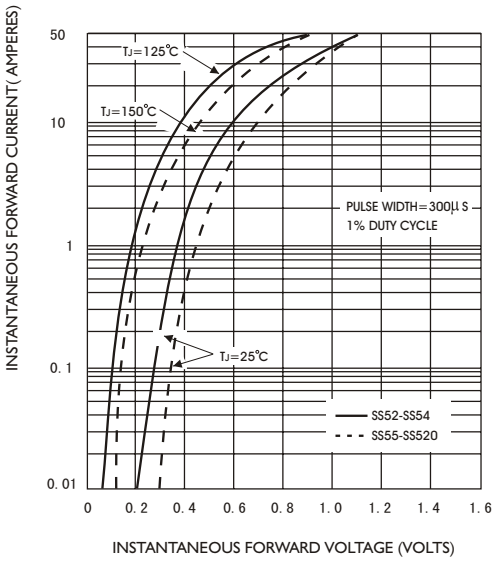


FIG.4-TYPICAL REVERSE CHARACTERISTICS

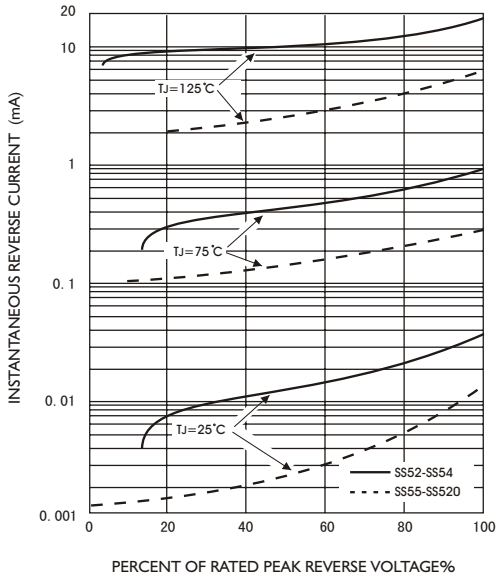


FIG.5-TYPICAL JUNCTION CAPACITANCE

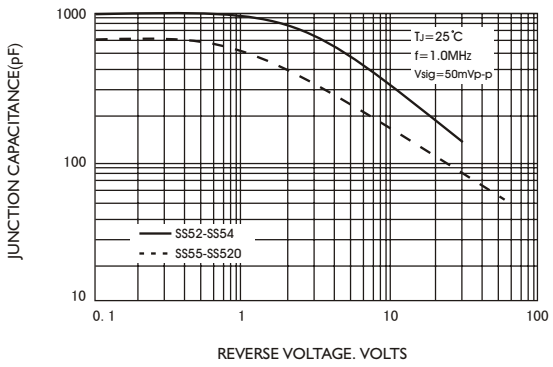


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE