SS52 THRU SS510

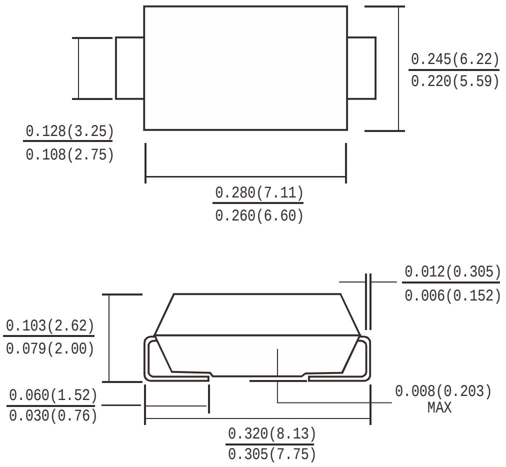
SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts
Forward Current - 5.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- For surface mount applications
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Low profile package
- Built-in strain relief ,ideal for automated placement
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260 °C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

SMC(DO-214AB)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- *Case*: JEDEC SMC(DO-214AB) molded plastic body
- *Terminals*: solder plated ,solderable per MIL-STD-750,method 2026
- *Polarity*: color band denotes cathode end
- *Weight*: 0.007ounce,0.21 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	SS 52	SS 53	SS 54	SS 55	SS 56	SS 58	SS 510	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	57	71	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	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			0.75		0.80	0.85	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A =25°C	I_R	1.5							mA
T_A =100°C		20			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							°C/W
Operating junction temperature range	T_J	-65 to+125			-65 to+150				°C
Storage temperature range	T_{STG}	-65 to+150							°C

Notes: 1.Pulse test: 300μ s 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

Rating and Characteristic Curves (TA = 25°C Unless otherwise noted)

SS52 THRU SS510

FIG.1-FORWARD CURRENT DERATING CURVE

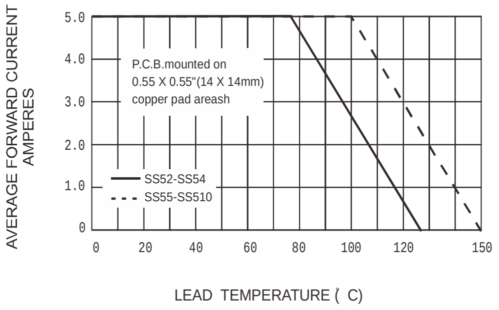


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

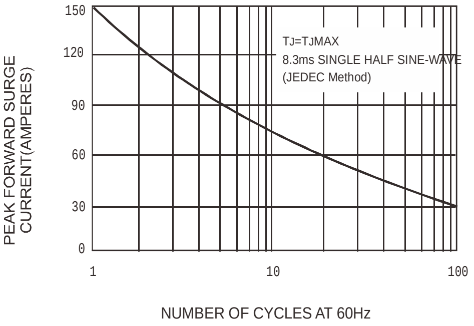


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

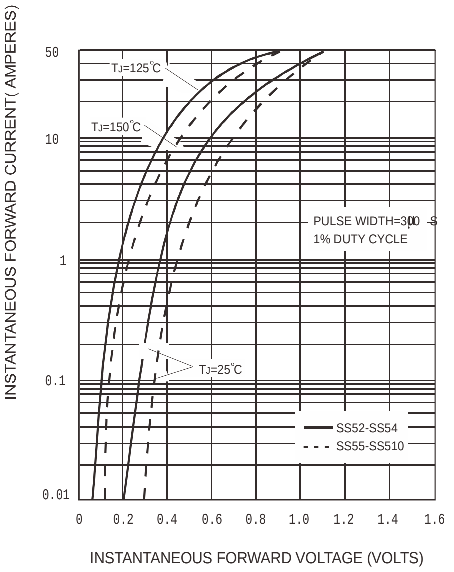


FIG.4-TYPICAL REVERSE CHARACTERISTICS

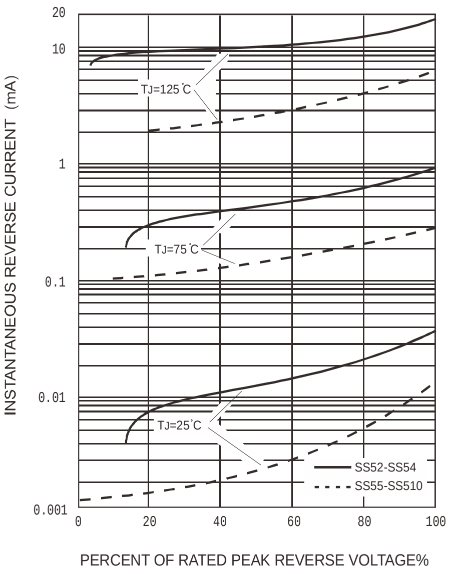


FIG.5-TYPICAL JUNCTION CAPACITANCE

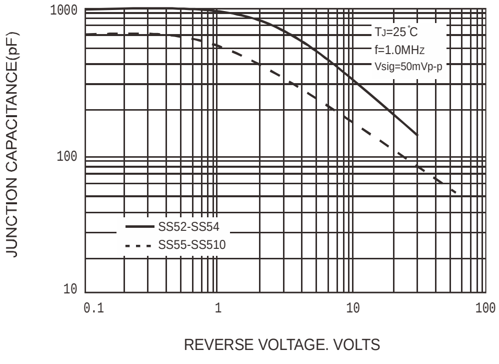


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE