



SC52 THRU SC510

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts

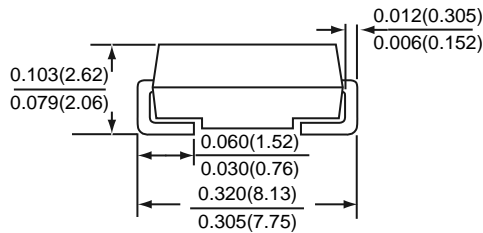
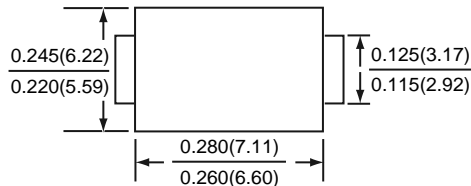
Forward Current - 5.0 Amperes

SMC / DO-214AB



FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * For surface mount applications
- * Low profile package
- * Built-in strain relief
- * Metal silicon junction, majority carrier conduction
- * Low power loss, high efficiency
- * High current capability, low forward voltage drop
- * High surge capability
- * For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- * Guardring for overvoltage protection
- * High temperature soldering guaranteed : 260°C/10 seconds, at terminals



*Dimensions in inches and (millimeters)

MECHANICAL DATA

Case : JEDEC DO-214AB molded plastic body
Terminals : Tin plated, solderable per MIL-STD-750D Method 2026
Polarity : Color band denotes cathode end
Weight : 0.007 ounces , 0.21 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.		SYMBOLS	SC52	SC54	SC56	SC510	UNITS
Maximum repetitive peak reverse voltage		VRRM	20	40	60	100	Volts
Maximum RMS voltage		VRMS	14	28	42	70	Volts
Maximum DC blocking voltage		VDC	20	40	60	100	Volts
Maximum average forward rectified current (SEE FIG.1)		I(AV)	5.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	150				Amps
Maximum instantaneous forward voltage at 5.0 A (NOTE 1)		VF	0.55	0.70	0.85		Volts
Maximum DC reverse current at rated DC blocking voltage (NOTE 1)	TA=25°C	IR	0.5				mA
	TA=100°C		20	10			
Typical thermal resistance (NOTE 2)		R θJA	40				°C / W
		R θJL	10				
Operating junction temperature range		TJ	-55 to +125		-55 to +150		°C
Storage temperature range		TSTG	-55 to +150				°C

NOTES : (1) Pulse test : 300us pulse width, 1% duty cycle
 (2) P.C.B. mounted with 0.55 x 0.55" (14 x 14mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES SC52 THRU SC510

FIG.1 - FORWARD CURRENT DERATING CURVE

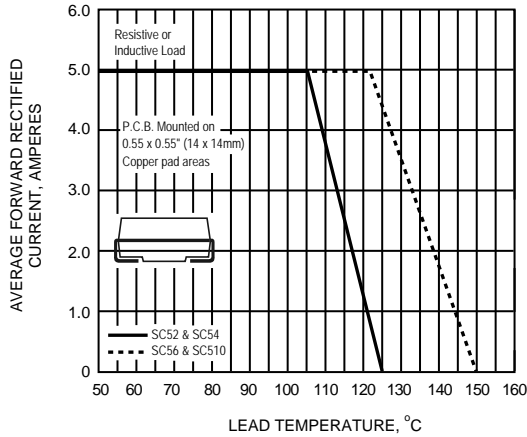


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

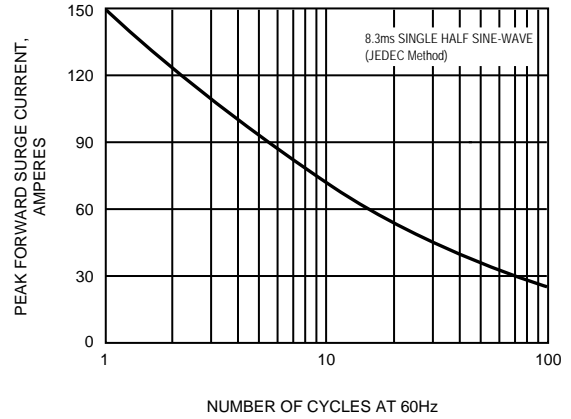


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

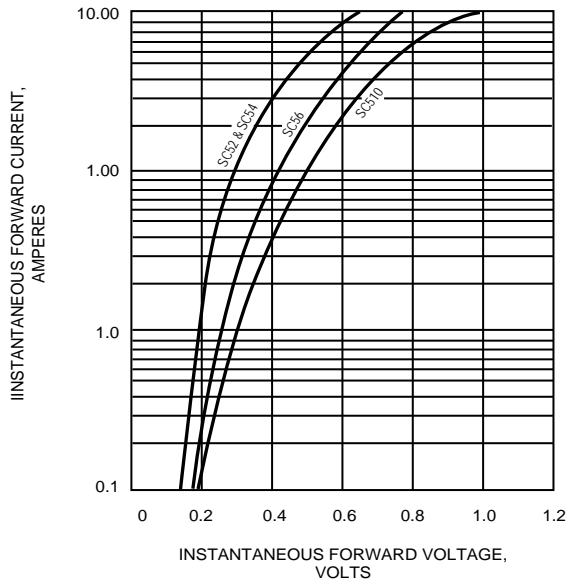


FIG.4 - TYPICAL REVERSE CURRENT CHARACTERISTICS

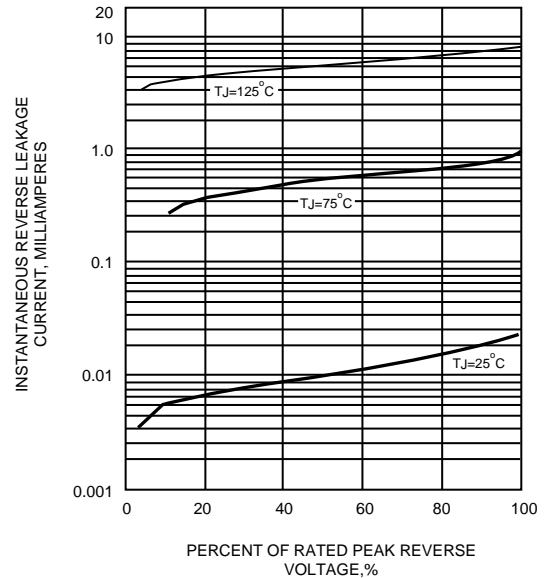


FIG.5 - TYPICAL JUNCTION CAPACITANCE

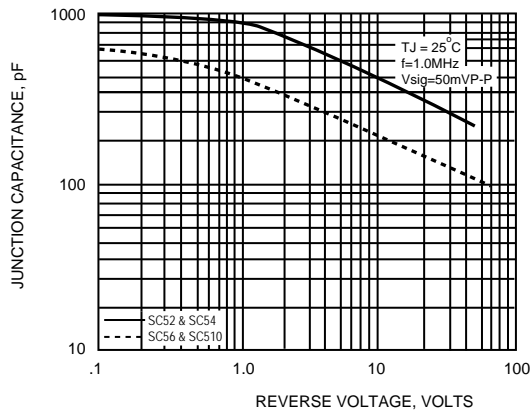


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

