

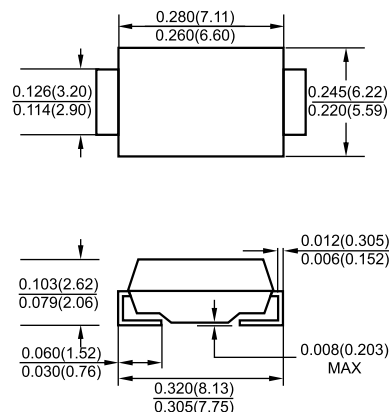


REVERSE VOLTAGE: 20 --- 60 V
CURRENT: 5.0 A

Features

- ✧ Plastic package has Underwriters Laborator
- ✧ Flammability Classification 94V-0
- ✧ For surface mounted applications
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Metal silicon junction, majority carrier conduction
- ✧ High surge capability
- ✧ High current capability, low forward voltage drop
- ✧ Low power loss, high efficiency
- ✧ For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 250°C/10 seconds at terminals

SMC/DO-214AB



Mechanical Data

- ✧ Case: JEDEC DO-214AB, molded plastic over passivated chip
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.007 ounces, 0.21 gram

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		B520C	B530C	B540C	B550C	B560C	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	20	30	40	50	60	V
Maximum RMS voltage	V _{RWS}	14	21	28	35	42	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	V
Maximum average forward rectified current at T _L (SEE FIG.1) (NOTE 2)	I _(AV)	5.0					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load(JEDEC Method)	I _{FSM}	175.0					A
Maximum instantaneous forward voltage at 5.0A(NOTE.1)	V _F	0.50			0.70		V
Maximum DC reverse current @T _A =25°C at rated DC blocking voltage(NOTE1) @T _A =100°C	I _R	0.5					mA
		20					
Typical thermal resistance (NOTE2)	R _{θJA}	50.0					°C/W
	R _{θJL}	10.0					
Operating junction and storage temperature range	T _{STG}	-65--- +150					°C
Storage temperature range	T _J	-65--- +150			-65--- +150		°C

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

2. P.C.B. mounted with 0.55"X0.55" (14.0X14.0mm²) copper pad areas

Ratings AND Characteristic Curves

FIG.1 – FORWARD DERATING CURVE

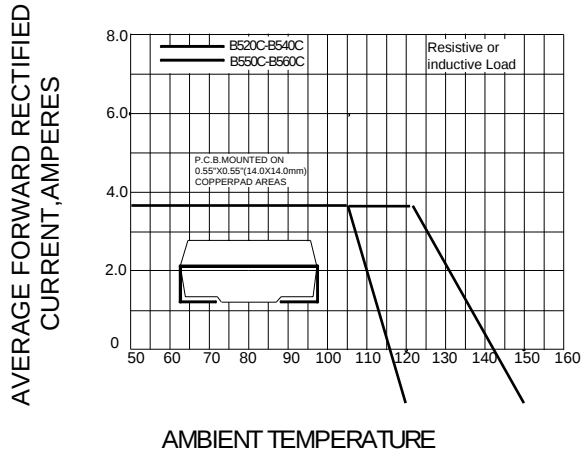


FIG.2-- PEAK FORWARD SURGE CURRENT

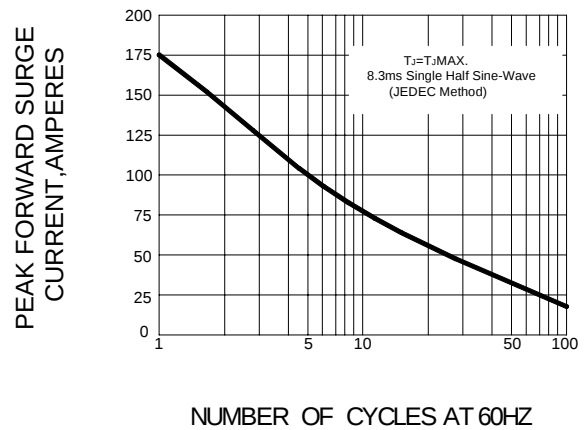


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

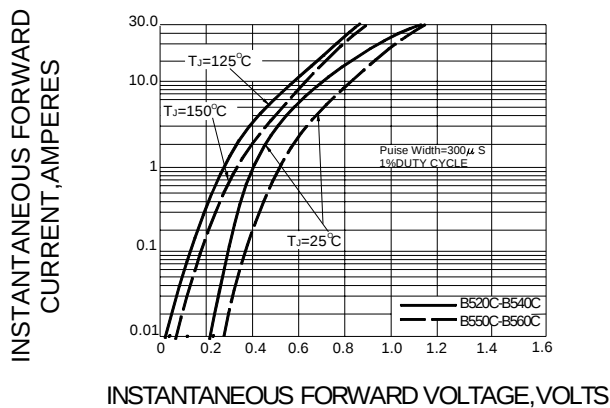


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

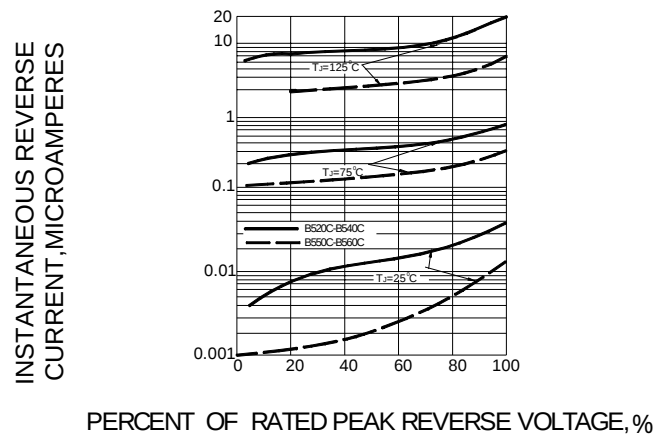


FIG.5-TYPICAL JUNCTION CAPACITANCE

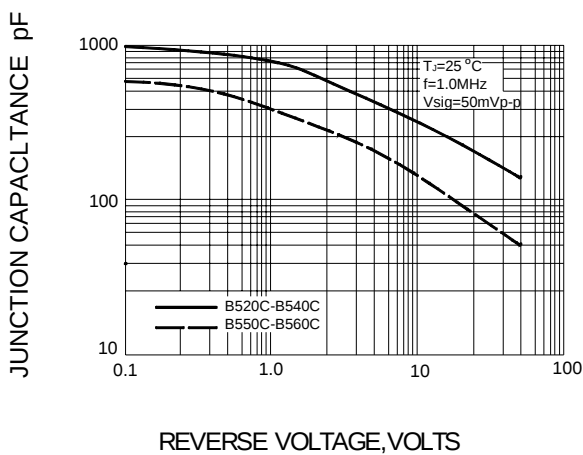
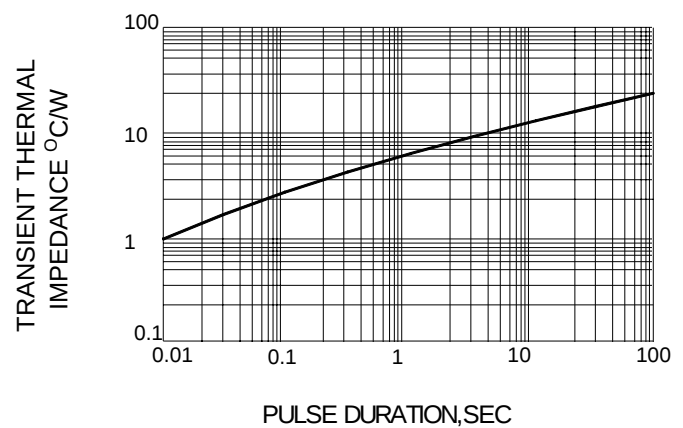


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMC	3000/REEL	42000	36X36X36.5	18.50	15.50