JXND ELECTRONICS CO.,LTD

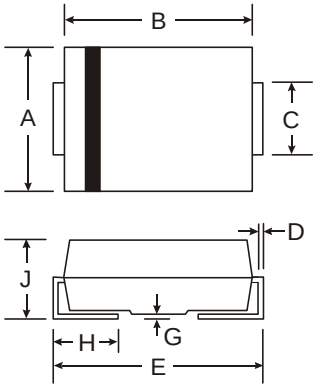
5A SCHOTTKY BARRIER RECTIFIER
B520C - B560C

Features

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Lead Free Finish/RoHS Compliant (Note 1)
- Green Molding Compound (No Halogen and Antimony)(Note 2)

Notes: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.

2. Product manufactured with Data Code 0924 (week 24, 2009) and newer are built with Green Molding Compound.



SMC		
Dim	**Min**	**Max**
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Mechanical Data

Case: SMC
Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
Moisture Sensitivity: Level 1 per J-STD-020
Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
Polarity: Cathode Band or Cathode Notch
Weight: 0.21 grams (approximate)

Maximum Ratings and Thermal Characteristics

@ TA = 25°C unless otherwise specified Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	B520C	B530C	B540C	B550C	B560C	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectified Output Current @ T_T = 90°C	I_O	5.0					A
Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave Superimposed on Rated Load	I_{FSM}	100					A
Typical Thermal Resistance, Junction to Terminal (Note 3)	$R_{\theta JT}$	10					K/W
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	50					°C/W
Operating Temperature Range	T_j	-55 to +125					°C
Storage Temperature Range	T_{STG}	-55 to +150					°C

RATINGS AND CHARACTERISTIC CURVES

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	B520C, B530C, B540C B550C, B560C	V_F	- -	- -	0.55 0.70	V	I_F = 5.0A, T_A = 25°C
Leakage Current (Note 5)		I_R	- -	- -	0.5 20	mA	@ Rated V_R, T_A = 25°C @ Rated V_R, T_A = 100°C
Total Capacitance		C_T	-	-	300	pF	V_R = 4V, f = 1MHz

Notes: 3. Thermal Resistance: Junction to ambient, unit mounted on PC board with 8.0 mm^2 (0.033 mm thick) copper pads as heat sink.
4. Short duration pulse test used to minimize self-heating effect.

Fig. 1 Typical Forward Characteristics

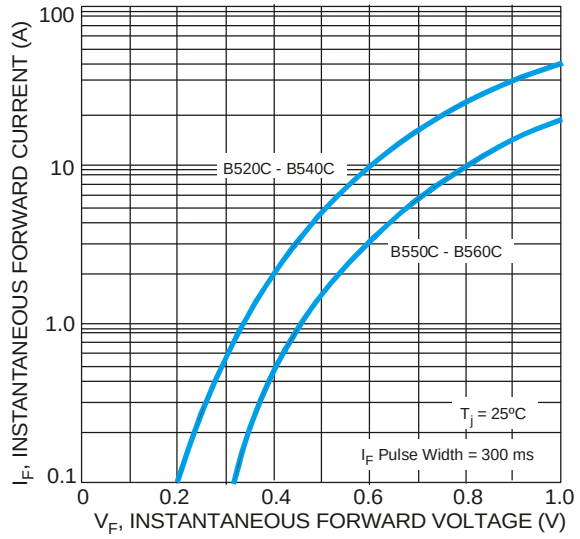


Fig. 2 Typical Reverse Characteristics

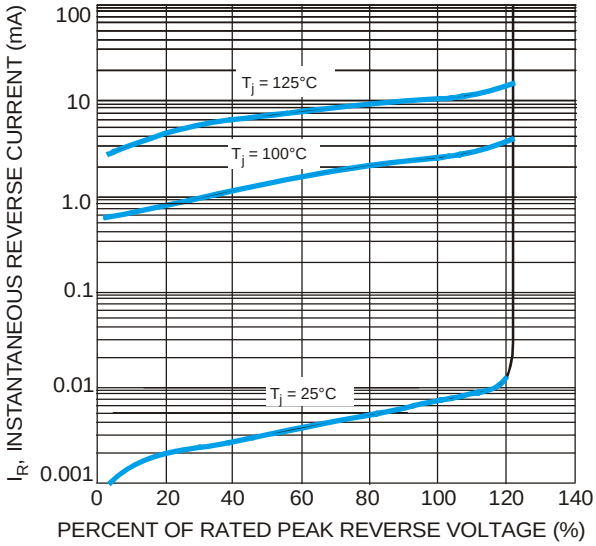


Fig. 3 Total Capacitance vs. Reverse Voltage

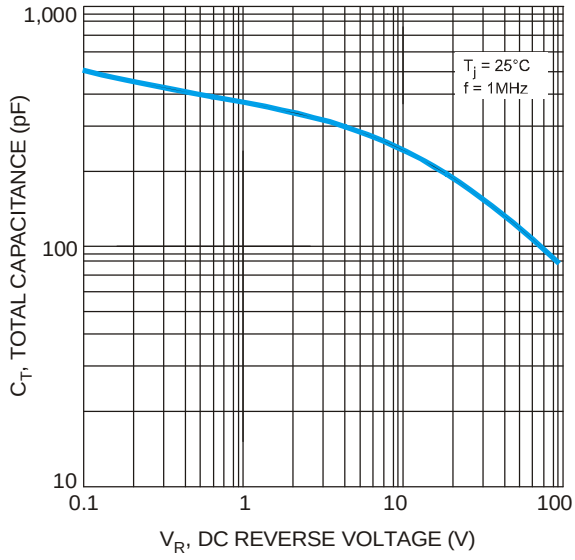
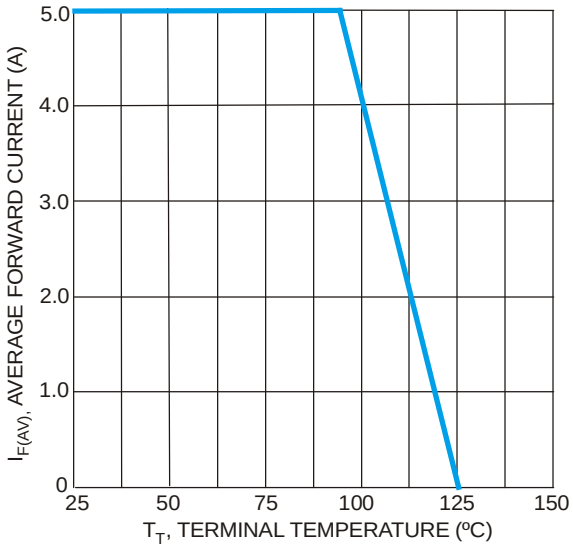


Fig. 4 Forward Current Derating Curve



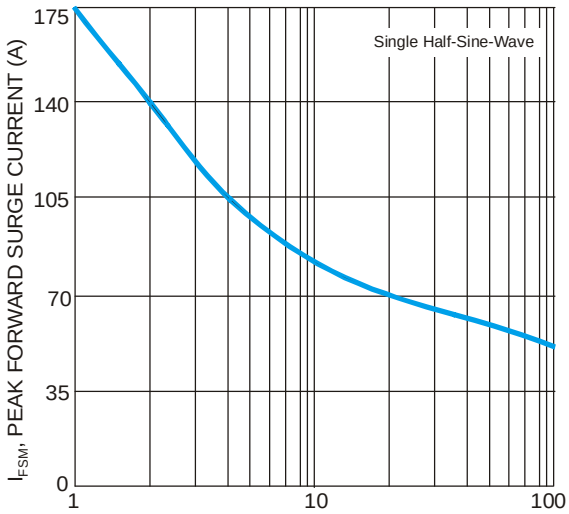


Fig. 5 Max Non-Repetitive Peak Forward Surge Current