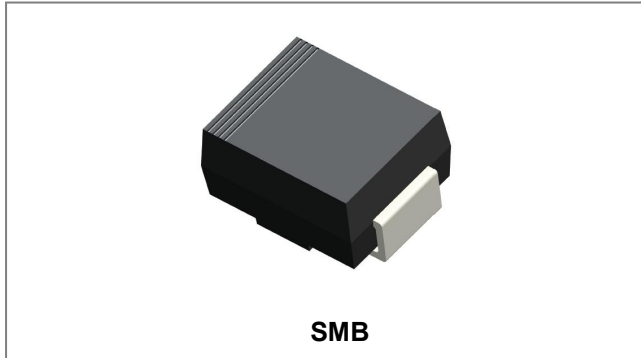


SK520B SCHOTTKY RECTIFIER



Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- Terminals finish: 100% Pure Tin
- This is a Pb - Free device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Maximum Ratings (limiting values, $T_C = 25^\circ\text{C}$ unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	200	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_A = 105^\circ\text{C}$, rectangular wave form (Note 1)	5	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	110	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 5A, Pulse, $T_J = 25^\circ\text{C}$	0.85	1.10	V
	V_{F2}	@ 5A, Pulse, $T_J = 125^\circ\text{C}$	0.74	0.90	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.0002	1	mA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	0.05	7	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}, T_C = 25^\circ\text{C}, f_{SIG} = 1\text{MHz}$	140	200	pF
Series Inductance	L_S	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/ μs

* Pulse width < 300 μs , duty cycle < 2%

Note:1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance, Junction to Lead	$R_{\theta JL}$	DC operation	17	°C/W
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	DC operation	75	°C/W
Approximate Weight	wt	-	0.09	g

Ratings and Characteristics Curves

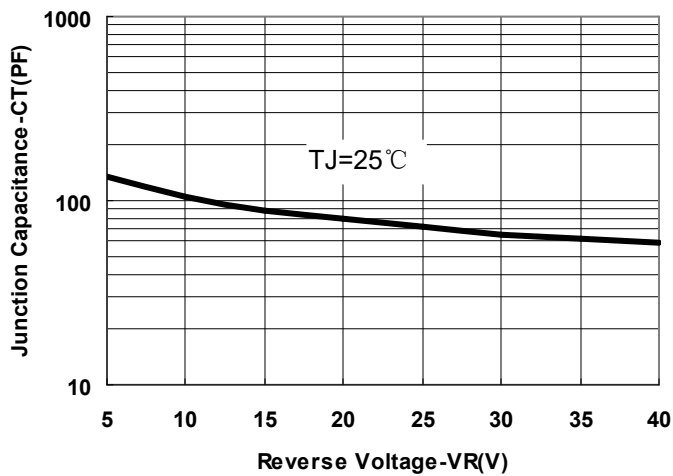


Fig.1-Typical Junction Capacitance

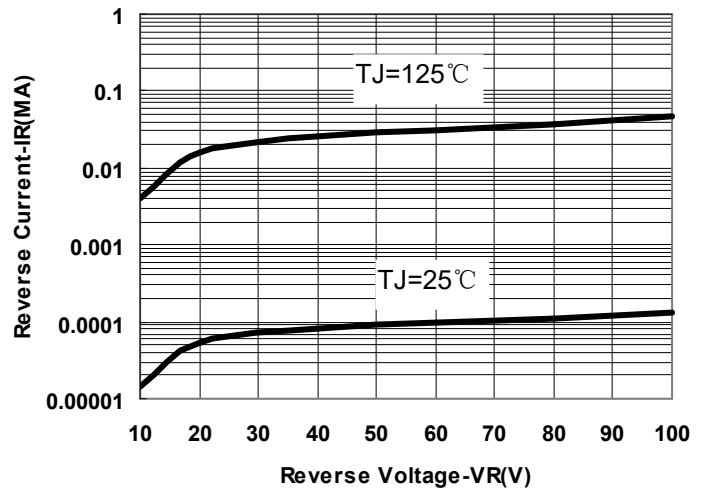


Fig.2-Typical Values Of Reverse Current

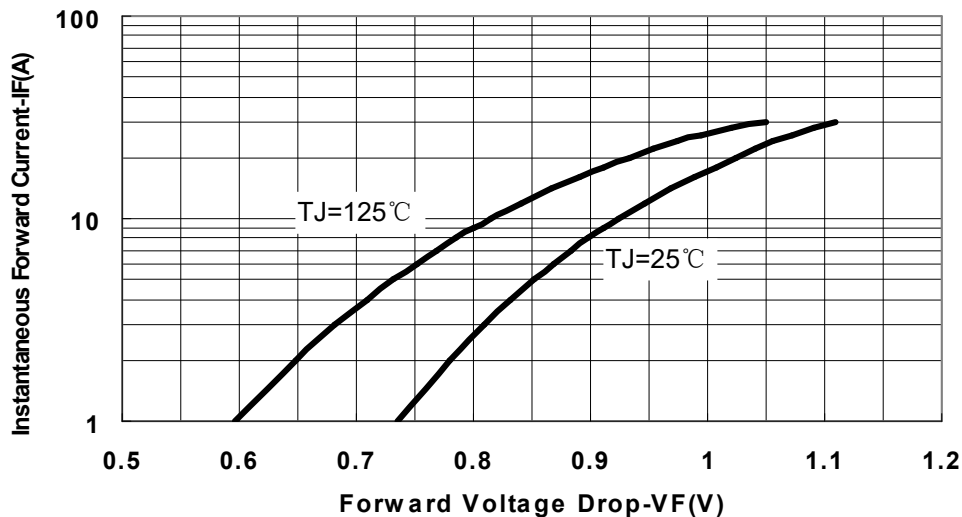
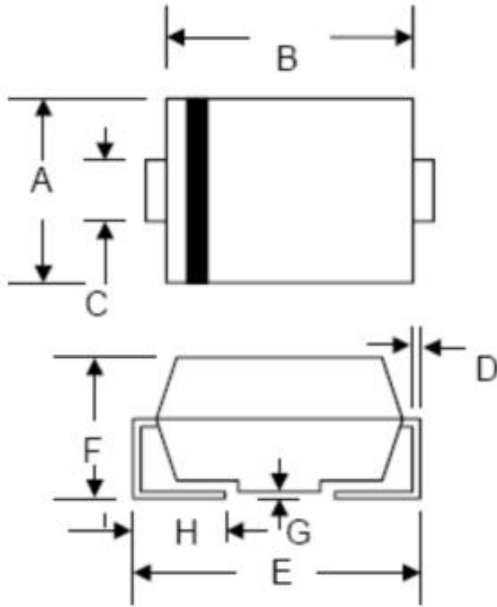


Fig.3-Typical Forward Voltage Drop Characteristics

Mechanical Dimensions SMB


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.06	4.70	0.160	0.185
C	1.80	2.20	0.071	0.087
D	0.152	0.305	0.006	0.012
E	4.80	5.59	0.189	0.220
F	2.10	2.60	0.083	0.102
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060

Ordering Information

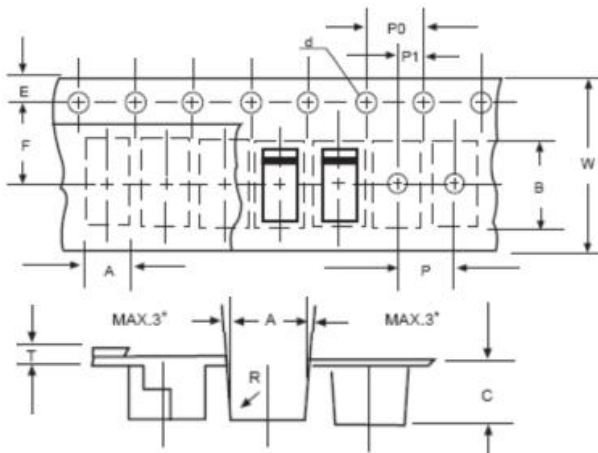
Device	Package	Shipping
SK520B	SMB (Pb-Free)	3000pcs / reel
SK520BTR	SMB (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


Where XXXXX is YYWWL

SK = Device Type
 5 = Forward Current (5A)
 20 = Reverse Voltage (200V)
 B = Package type
 YY = Year
 WW = Week
 L = Lot Number

Carrier Tape Specification SMB


SYMBOL	Millimeters	
	Min.	Max.
A	3.70	3.90
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20

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