Technical Data
Data Sheet N1744, Rev. A

RoHS

SK110 SCHOTTKY RECTIFIER

SMB

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- 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
- Disk drives
- Battery charging

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	100	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @T_L=120°C, rectangular wave form	1	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse, T_c = 25 °C	30	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 1A, Pulse, T_A = 25 °C	0.76	0.85	V
	V_{F2}	@ 1A, Pulse, T_J = 125 °C	0.65	0.75	V
Reverse Current*	I_{R1}	@V_R = rated V_R, T_A = 25 °C	0.004	0.5	mA
	I_{R2}	@V_R = rated V_R, T_A = 100 °C	-	20	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C, f_{SIG} = 1MHz	30	80	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%

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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	22	°C/W
Typical Thermal Resistance Junction to Ambient(Note 1)	$R_{\theta JA}$	DC operation	95	°C/W
Approximate Weight	wt	-	0.09	g

Note: 1. Mounted on P.C. Board with 5.0mm² copper pad areas

Ratings and Characteristics Curves

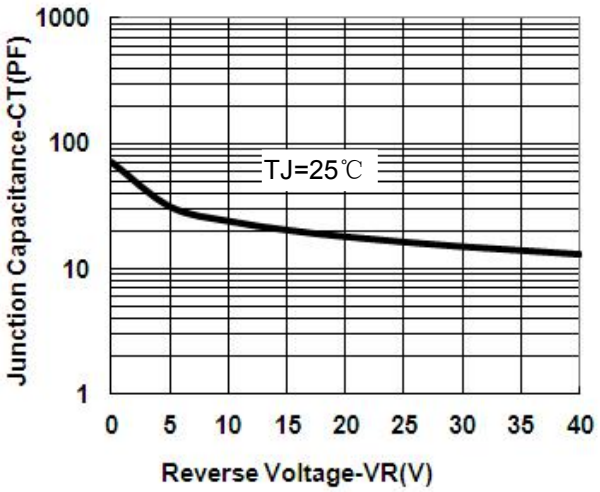

Fig.1-Typical Junction Capacitance

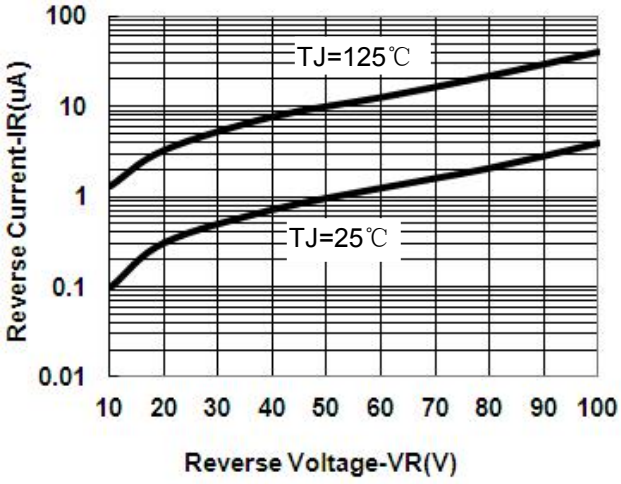

Fig.2-Typical Values Of Reverse Current

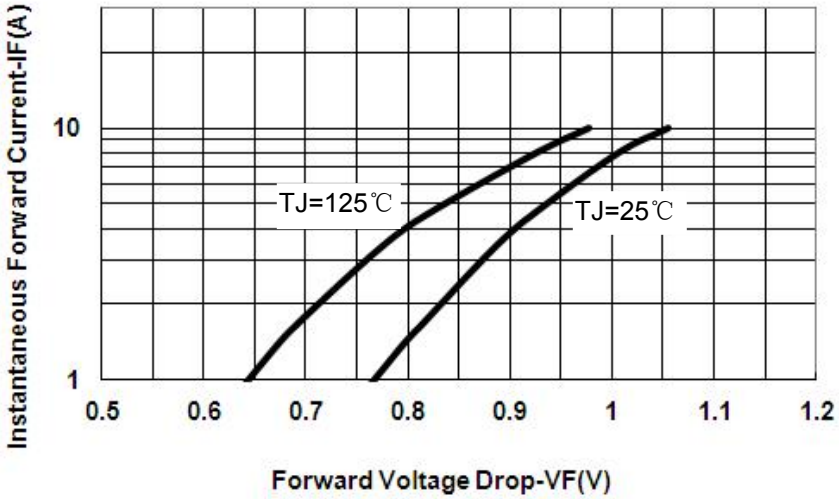

Fig.3-Typical Forward Voltage Drop Characteristics

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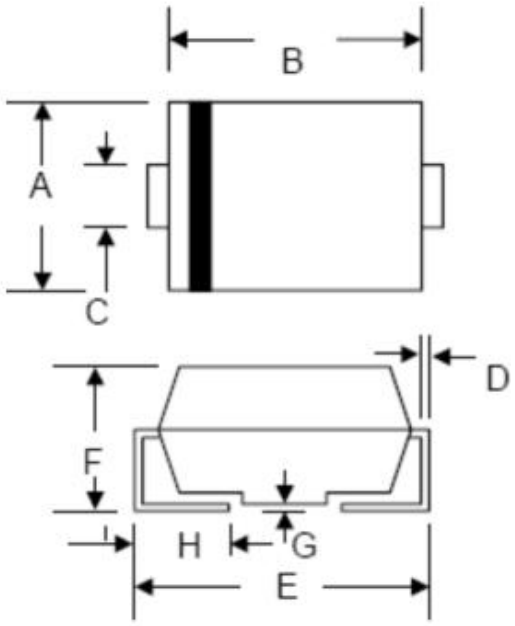
Mechanical Dimensions SMB



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
SK110	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.

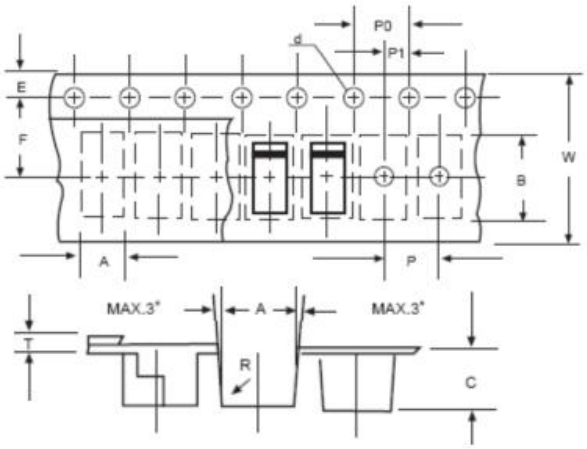
Marking Diagram

Where XXXXX is YYWWL

SK = Device Type
1 = Forward Current (1A)
10 = Reverse Voltage (100V)
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification SMB



SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
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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