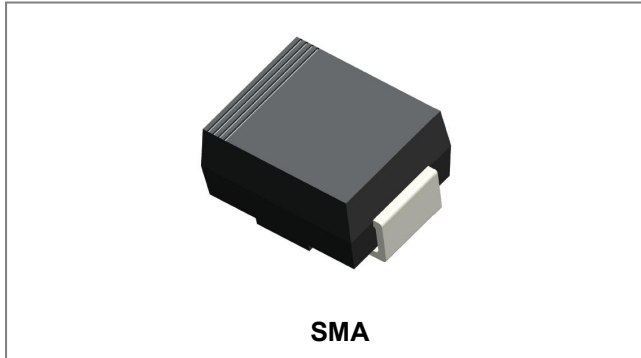


SK54A SCHOTTKY RECTIFIER



Features

- Small foot print, surface mountable
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green products in compliance the ROHS directive
- 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:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	40	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L=105^\circ\text{C}$, rectangular wave form	5	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse, $T_c = 25^\circ\text{C}$	125	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 5A, Pulse, $T_J = 25^\circ\text{C}$	0.58	0.65	V
	V_{F2}	@ 5A, Pulse, $T_J = 125^\circ\text{C}$	0.50	0.63	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.01	1.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	8	30.0	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}, T_c = 25^\circ\text{C}, f_{SIG} = 1\text{MHz}$	130	280	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/ μs

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

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	20	°C/W
Typical Thermal Resistance Junction to Case	$R_{\theta JA}$	DC operation	77	°C/W
Approximate Weight	wt	-	0.06	g

Ratings and Characteristics Curves

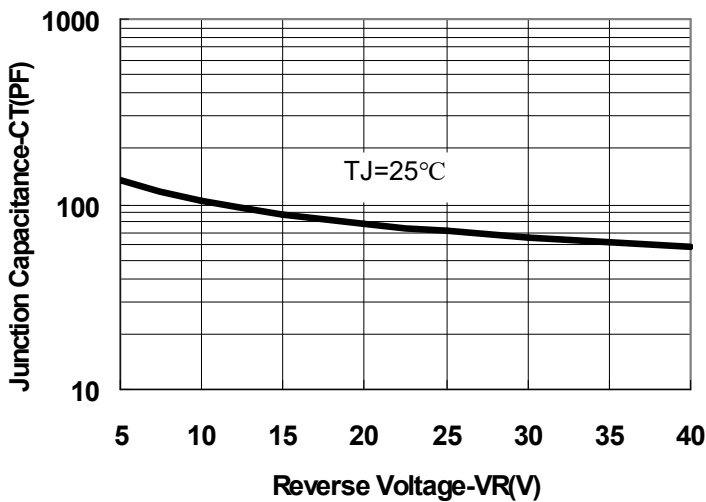


Fig.1-Typical Junction Capacitance

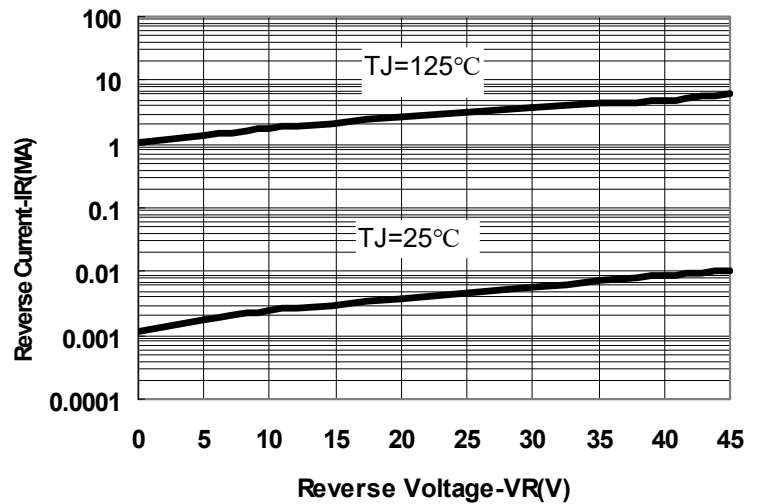


Fig.2-Typical Reverse Characteristics

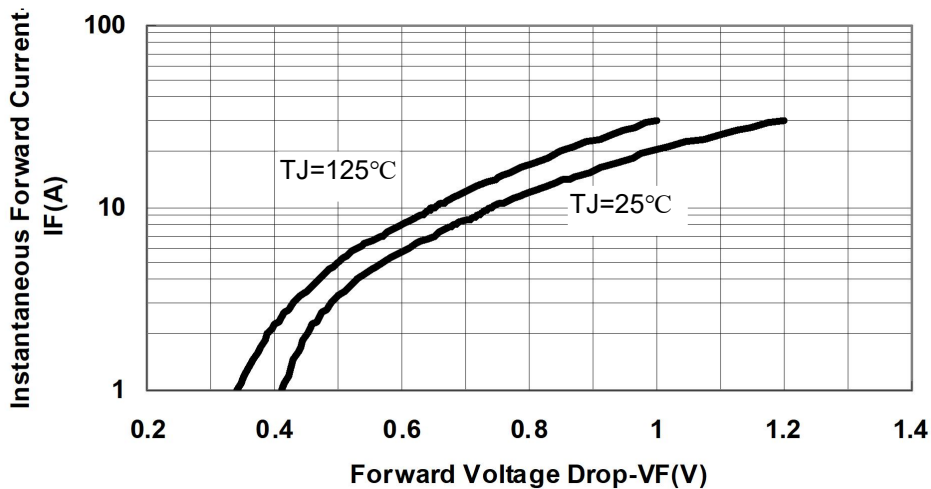
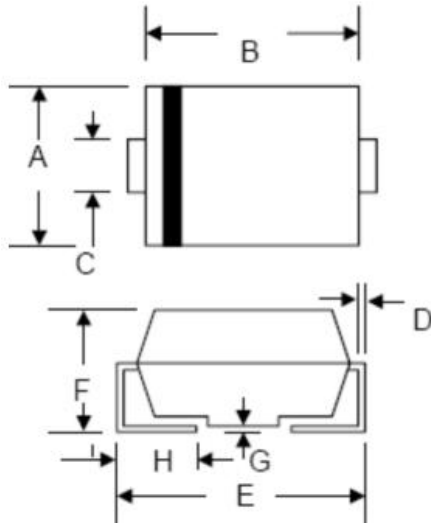


Fig.3-Typical Instantaneous Forward Voltage Characteristics

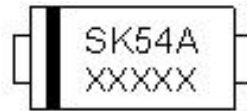
Mechanical Dimensions SMA


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.84	0.094	0.112
B	3.99	4.75	0.157	0.187
C	1.05	1.70	0.041	0.067
D	0.15	0.51	0.006	0.020
E	4.80	5.66	0.189	0.223
F	1.90	2.95	0.075	0.116
G	0.05	0.203	0.002	0.008
H	0.76	1.52	0.030	0.600

Ordering Information

Device	Package	Shipping
SK54A	SMA (Pb-Free)	5000pcs / reel

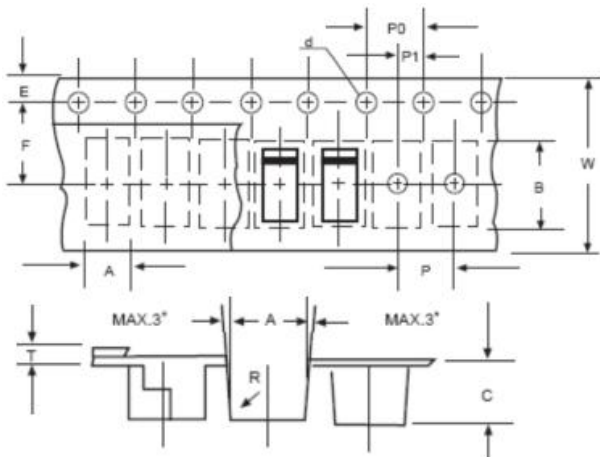
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


Where XXXXX is YYWWL

- SK = Device Type
- 5 = Forward Current (5A)
- 4 = Reverse Voltage (40V)
- A = Package type
- YY = Year
- WW = Week
- L = Lot Number

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

Carrier Tape Specification SMA


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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