Technical Data
Data Sheet N1698, Rev. A

SK23A SCHOTTKY RECTIFIER

SMA

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
- Terminals finish: Tin Lead-free plated
- 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°C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	30	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @T_L=105°C, rectangular wave form	2	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	50	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 2A, Pulse, T_J = 25 °C	0.50	0.55	V
Reverse Current*	I_{R1}	@V_R = rated V_R, T_J = 25 °C	0.02	0.5	mA
	I_{R2}	@V_R = rated V_R, T_J = 100 °C	0.5	20	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C, f_{SIG} = 1MHz	131	250	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 +125	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{\theta Jc}$	DC operation	8	℃/W
Approximate Weight	wt	-	0.06	g

Ratings and Characteristics Curves

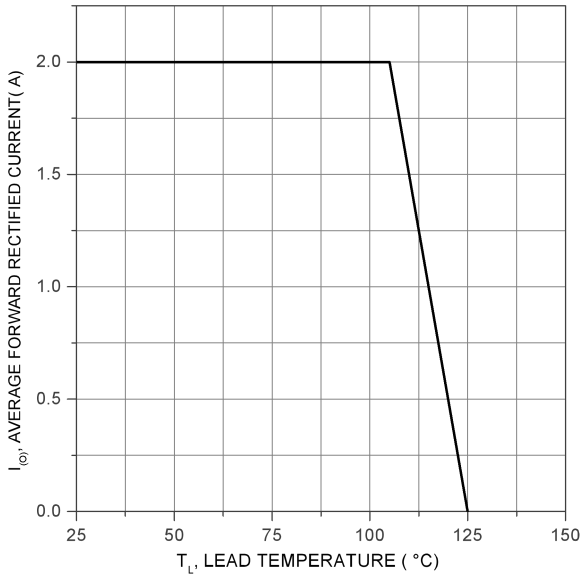

Fig.1 Forward Current Derating Curve

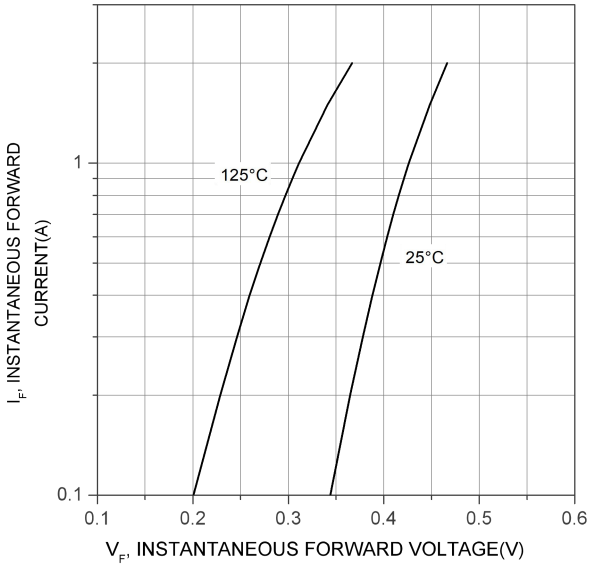

Fig.2 Typical Forward Characteristics

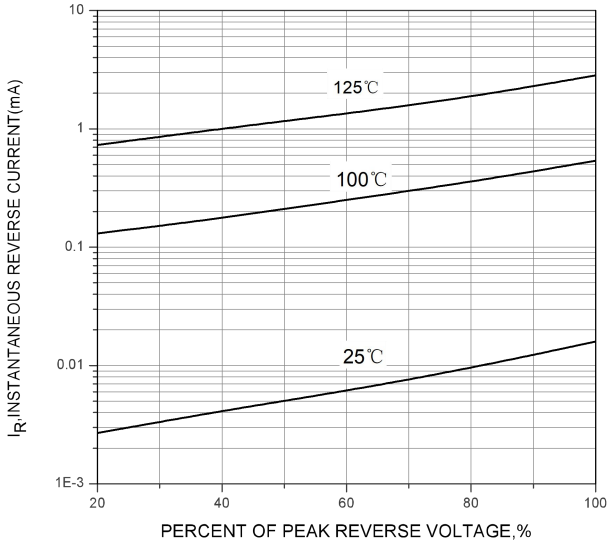

Fig.3 Typical Reverse Characteristics

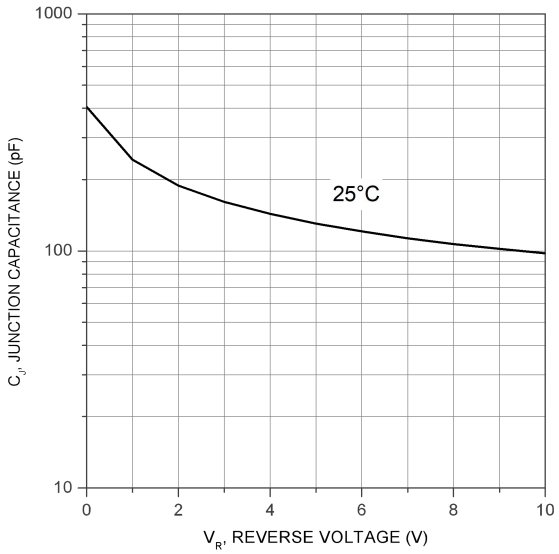

Fig.4 Typical Junction Capacitance

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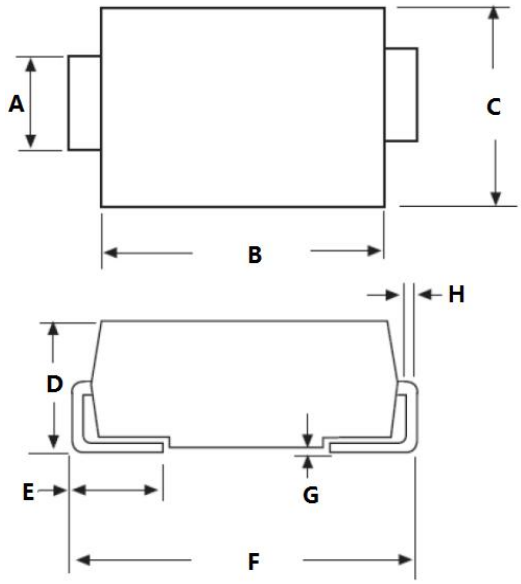
RoHS

Mechanical Dimensions SMA



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.6	0.156	0.181
C	2.25	2.95	0.089	0.116
D	1.95	2.9	0.077	0.114
E	0.75	1.6	0.03	0.063
F	4.8	5.6	0.189	0.22
G	0.05	0.2	0.002	0.008
H	0.15	0.41	0.006	0.016

Ordering Information

Device	Package	Shipping
SK23A	SMA	5000pcs / reel
SK23ATR	SMA	5000pcs / reel

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

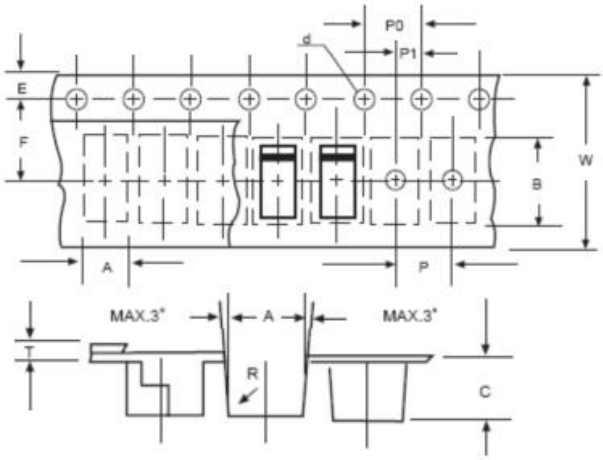
Marking Diagram

Where XXXXX is YYWWL

SK	= Device Type
2	= Forward Current (2A)
3	= Reverse Voltage (30V)
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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