SK12 THRU SK1B

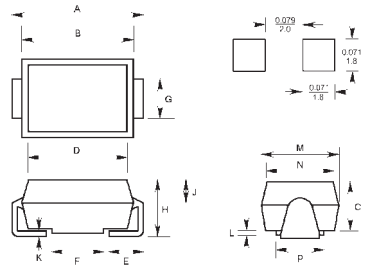
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts
Forward Current - 1.0 Ampere

Features

- Schottky barrier rectifier
- Guardring protection
- Low forward voltage
- Reverse energy tested
- High current capability
- Extremely low thermal resistance

SMA



Mechanical Data

- **Case:** SMA molded plastic body
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.004 ounce, 0.11 gram

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.216	0.226	5.48	5.74	
B	0.176	0.182	4.48	4.63	
C	0.094	0.100	2.40	2.55	
D	0.170	0.176	4.33	4.48	
E	0.039	0.055	1.00	1.40	
F	0.080	0.081	2.03	2.07	
G	0.068	0.083	1.72	2.10	
H	0.112	0.118	2.85	3.00	
J	0.057	-	1.44	-	
K	-	0.018	-	0.45	
L	0.016	-	0.40	-	
M	0.109	0.115	2.77	2.93	
N	0.105	0.107	2.67	2.73	
P	0.078	0.081	2.00	2.05	

Maximum Ratings and Electrical Characteristics @25℃ unless otherwise specified

	Symbols	SK12	SK13	SK14	SK15	SK16	SK17	SK18	SK19	SK1B	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	Volts
Average forward current at T_J=90℃	$I_{F(AV)}$	1.0									Amp
Peak forward surge current 8.3mS single half sine-wave	I_{FSM}	50.0									Amps
Maximum instantaneous forward voltage at I_{FM}=1.0A, T_J=25℃ (Note 1)	V_F	0.45	0.55	0.60	0.72			0.80			Volts
Maximum DC reverse current at rated DC blocking voltage T_J=25℃	I_R	0.5									mA
Typical junction capacitance (Note 2)	C_J	230	50								ρF
Maximum thermal resistance	$R_{\theta JL}$	15									℃/W
Operating and storage temperature range	T_J, T_{STG}	-65 to +175									℃

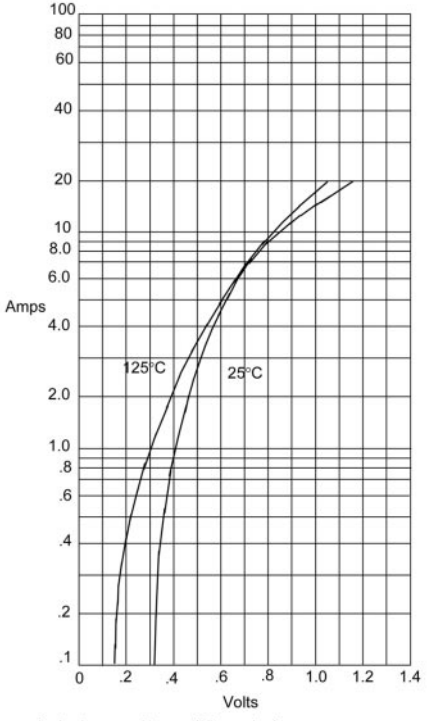
Notes:

(1) Pulse test: Pulse width 300uSec, duty cycle 2%.

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

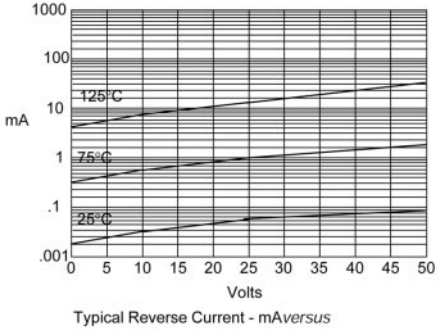
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



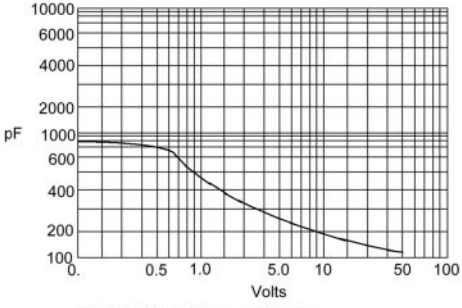
Instantaneous Forward Current - Amperes*versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



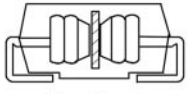
Typical Reverse Current - mA*versus*
Reverse Voltage - Volts

Figure 3
Typical Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
New SMA Assembly



Round Lead
Process

SK12

RATINGS AND CHARACTERISTIC CURVES

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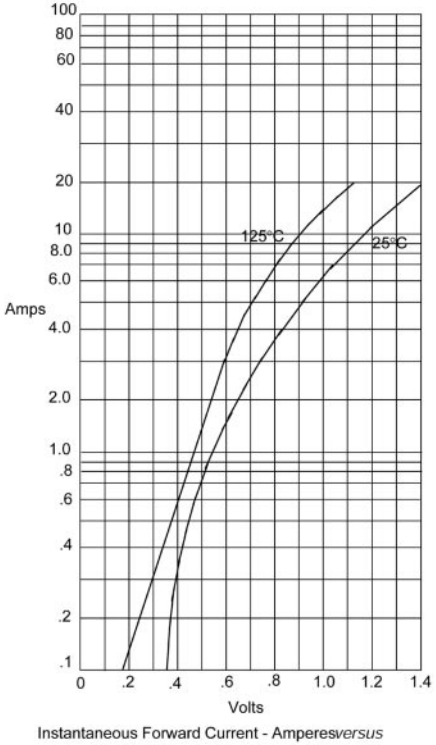
Typical Forward Characteristics



Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

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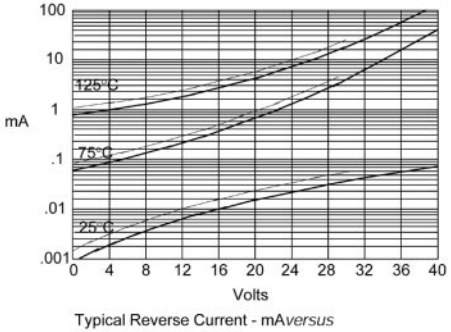
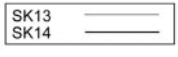
Typical Reverse Characteristics





Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

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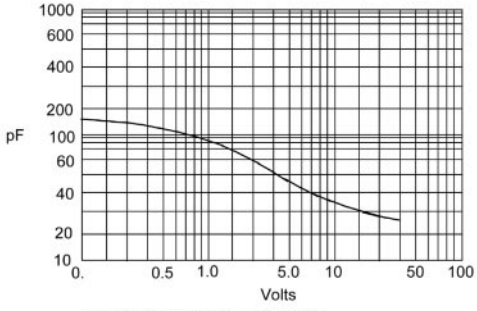

Junction Capacitance - pF *versus*
Reverse Voltage - Volts

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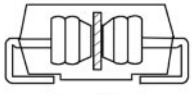

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