

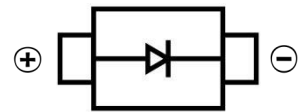
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low forward voltage drop
- \* Low cost



### SMA



### MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.064 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	SYMBOL	SK 12	SK 13	SK 14	SK 15	SK 16	SK 17	SK 18	SK 19	SK 1B	UNITS
Maximum Recurrent 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
Maximum Average Forward Current See Fig.1	$I_{F(AV)}$	1.0									Amp.
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40									Amps.
Maximum Forward Voltage at $I_F = 1.0$ Amp.	$V_F$	0.5		0.7			0.79				Volt.
Maximum Reverse Current at $T_a = 25\text{ }^\circ\text{C}$	$I_R$	0.5									mA
Rated DC Blocking Voltage (Note 1) $T_a = 100\text{ }^\circ\text{C}$	$I_{R(H)}$	10.0			5.0						mA
Typical Thermal Resistance	$R_{\theta JL}$	15									$^\circ\text{C/W}$
Junction Temperature Range	$T_J$	- 40 to + 125				- 65 to + 150					$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150									$^\circ\text{C}$

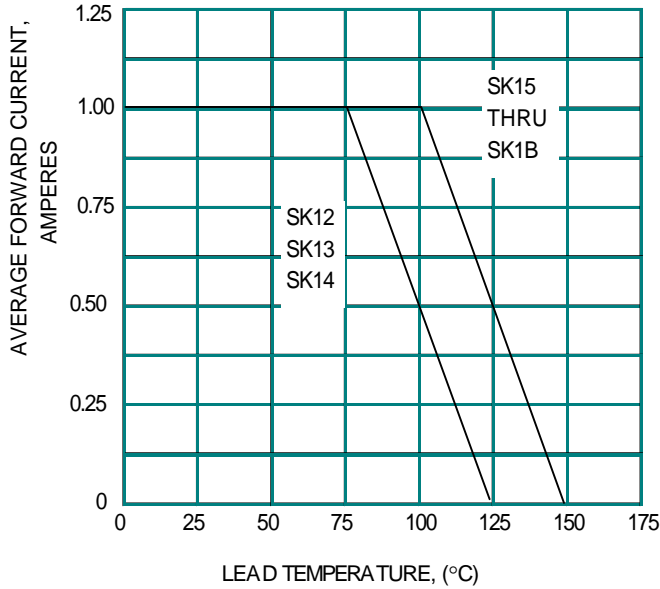
### Notes :

(1) Pulse Test : Pulse Width = 300  $\mu\text{s}$ , Duty Cycle = 2%.

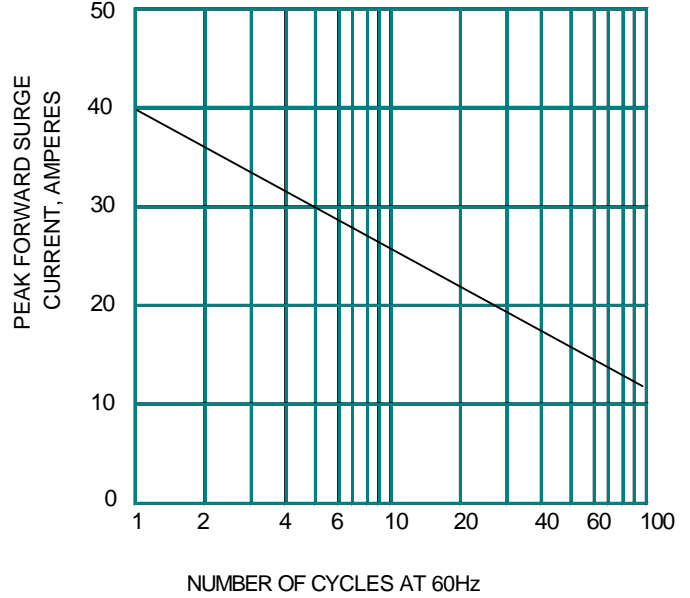
**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**Typical Characteristics**

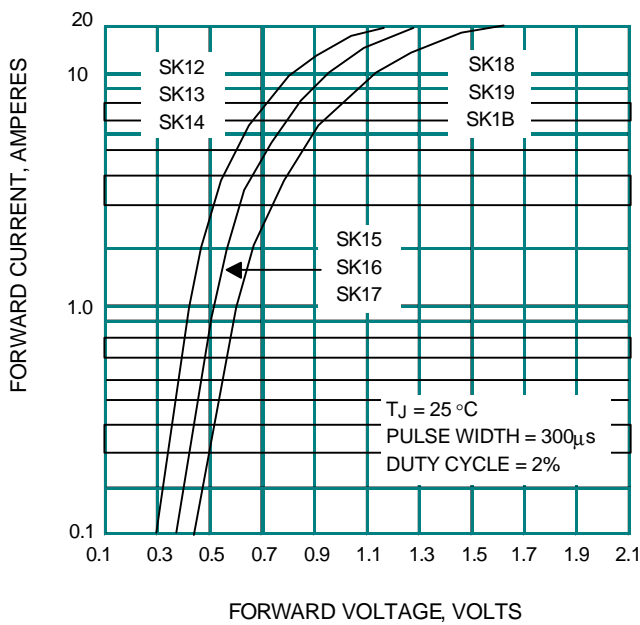
**FIG.1 - FORWARD CURRENT DERATING CURVE**



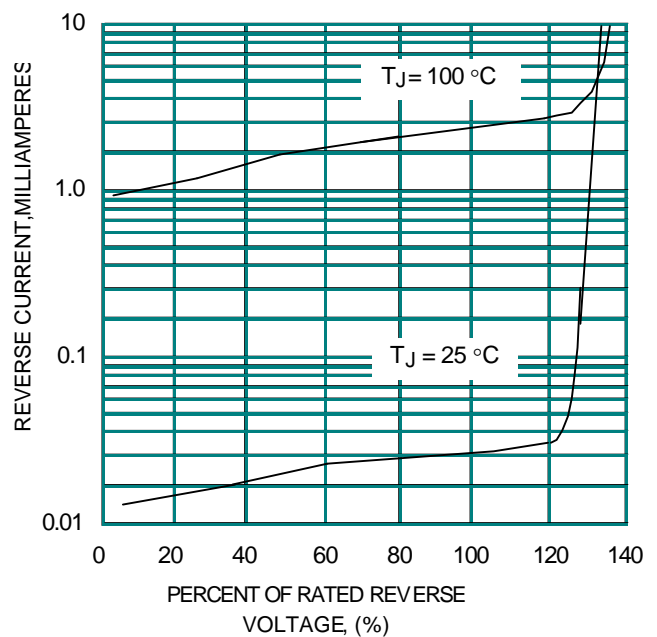
**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**

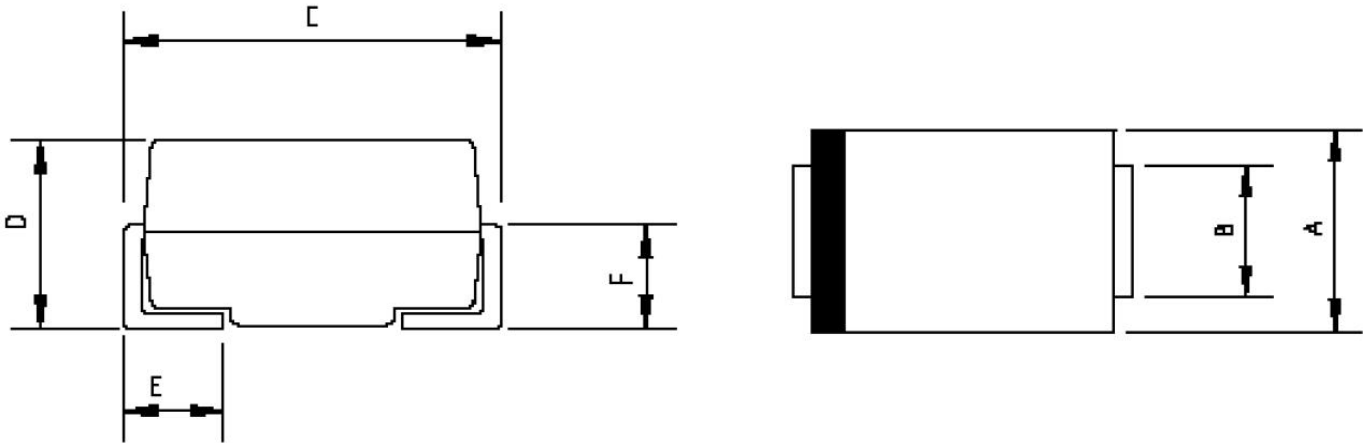


**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**



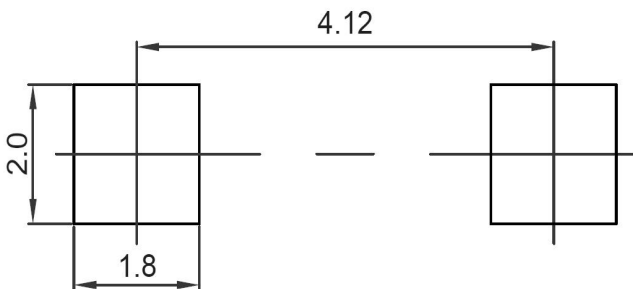
**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**SMA Package Outline Dimensions**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.80	0.086	0.110
B	1.30	1.70	0.051	0.067
C	4.70	5.30	0.185	0.209
D	1.70	2.55	0.067	0.100
E	0.90	1.50	0.035	0.059
F	0.90	1.50	0.035	0.059

**SMA Suggested Pad Layout**



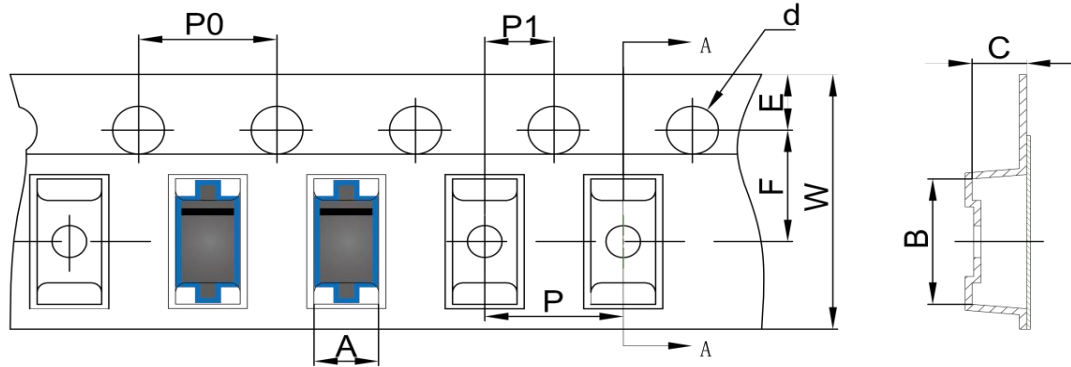
**Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

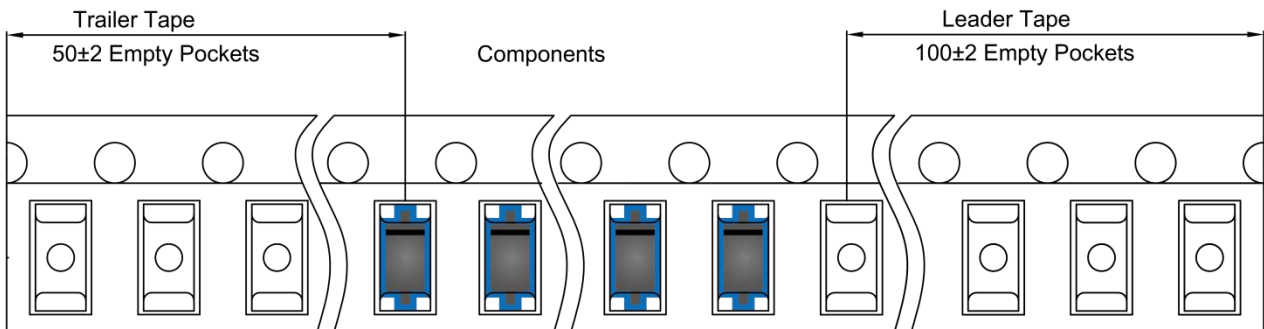
### SMA Tape and Reel

#### SMA Embossed Carrier Tape

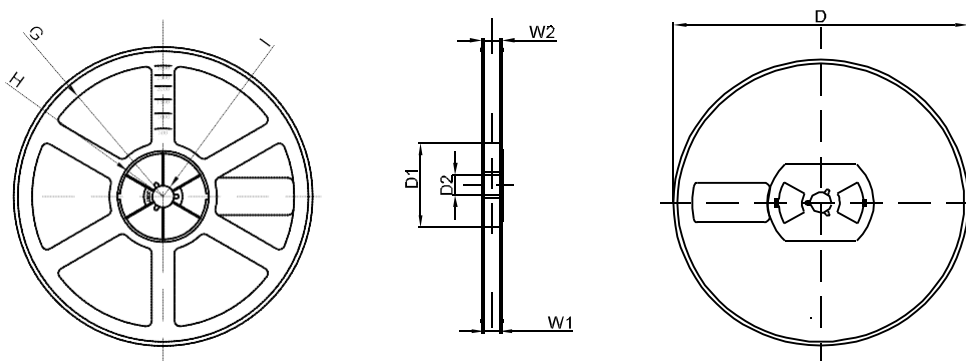


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMA	2.89	5.35	2.68	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

#### SMA Tape Leader and Trailer



#### SMA Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1