

## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

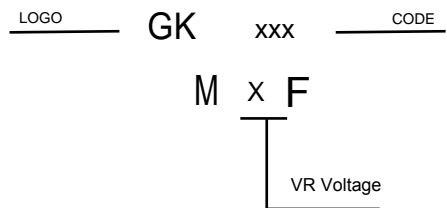
1.0 Ampere

## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-202F method 208 guranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \*



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwies specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

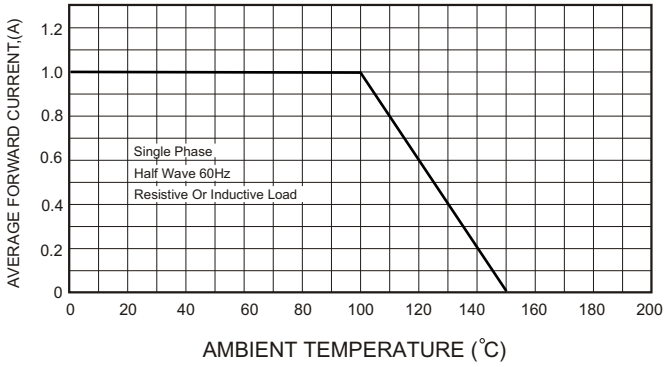
TYPE NUMBER	M1F	M2F	M3F	M4F	M5F	M6F	M7F	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage at 1.0A	1.1							V
Maximum DC Reverse Current $T_a=25^{\circ}\text{C}$	5.0							$\mu\text{A}$
at Rated DC Blocking Voltage $T_a=100^{\circ}\text{C}$	50							$\mu\text{A}$
Typical Junction Capacitance (Note 1)	15							pF
Typical Thermal Resistance R <sub>JA</sub> (Note 2)	50							$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range $T_j, T_{stg}$	-65 — +150							$^{\circ}\text{C}$

### NOTES:

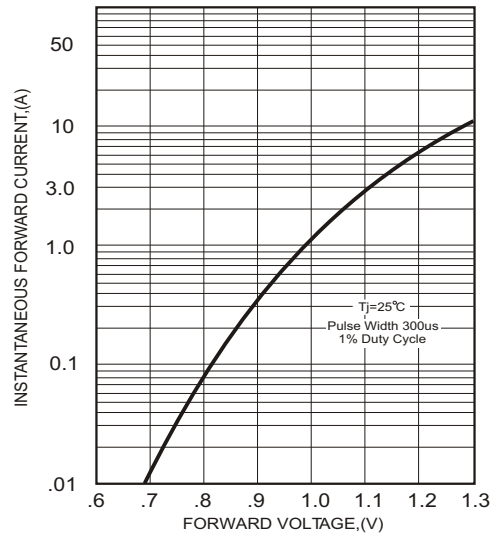
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance from Junction to Ambient.

**RATING AND CHARACTERISTIC CURVES**

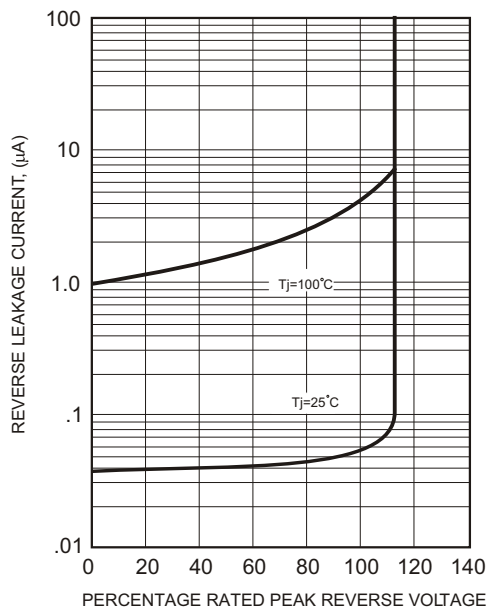
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



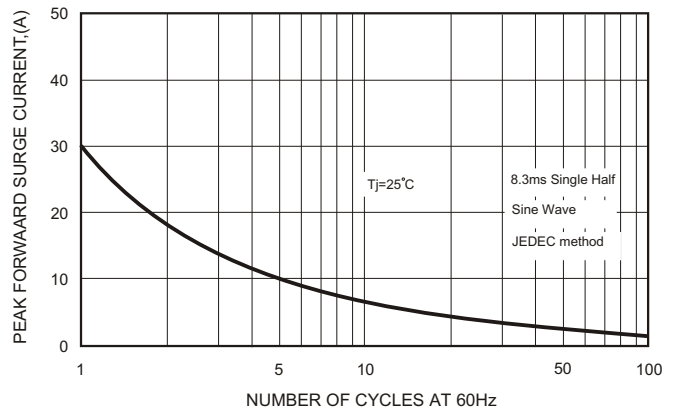
**FIG.2-TYPICAL FORWARD CHARACTERISTICS**



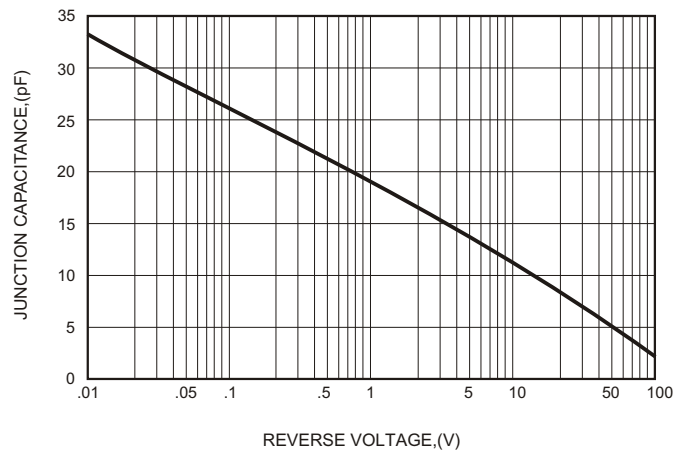
**FIG.3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



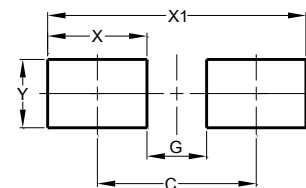
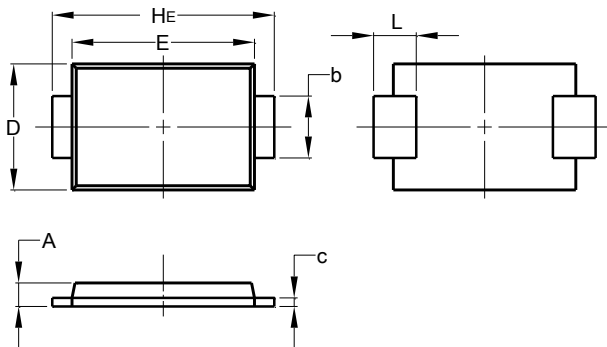
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_P$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C



Package Dimensions & Suggested Pad Layout

SMAF



SMAF		
Dim	Min	Max
A	0.90	1.20
b	1.30	1.60
c	0.10	0.20
D	2.40	2.70
E	3.30	3.70
$H_E$	4.40	4.90
L	0.60	1.20
All Dimensions in mm		

Dimensions	Value (in mm)
C	3.80
G	2.20
X	1.60
X1	5.40
Y	1.70

Tape & reel specification

Tape		Symbol	Dimension (mm)		
		P0	4.00±0.20		
		P1	4.00±0.20		
		P2	2.00±0.20		
		D0	1.55±0.25		
		D1	1.55±0.25		
		E	1.75±0.20		
		F	5.50±0.20		
		W	12.00±0.20		
		A0	2.85±0.20		
		B0	5.00±0.20		
<p>7" Reel</p>		K0	1.45±0.20		
		T	0.26±0.10		
		D2	176.0±5.0		
		D3	55.0Min.		
		D4	14.0±2.5		
		W1	14.0±2.5		
		Quantity: 3000PCS			
		<p>13" Reel</p>		D5	330.0±5.0
				D6	73.0Min.
				D7	14.0±2.5
W2	14.0±2.5				
Quantity: 10000PCS					