

## FEATURES

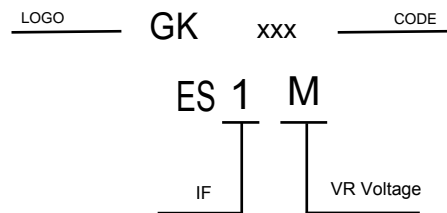
- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Super fast recovery time for high speed switching

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.063 gram



**VOLTAGE RANGE**  
1000 Volts  
**CURRENT**  
1.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

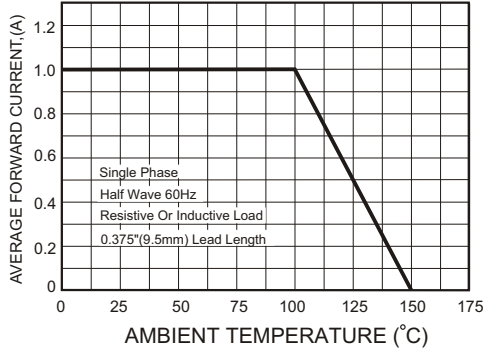
TYPE NUMBER	ES1M	UNITS
Maximum Recurrent Peak Reverse Voltage	1000	V
Maximum RMS Voltage	700	V
Maximum DC Blocking Voltage	1000	V
Maximum Average Forward Rectified Current	1.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30	A
Maximum Instantaneous Forward Voltage at 1.0A	1.7	V
Maximum DC Reverse Current Ta=25°C	5.0	μA
at Rated DC Blocking Voltage Ta=100°C	100	μA
Maximum Reverse Recovery Time (Note 1)	70	nS
Typical Junction Capacitance (Note 2)	15	pF
Operating and Storage Temperature Range Tj, Tstg	-65 — +150	°C

**NOTES:**

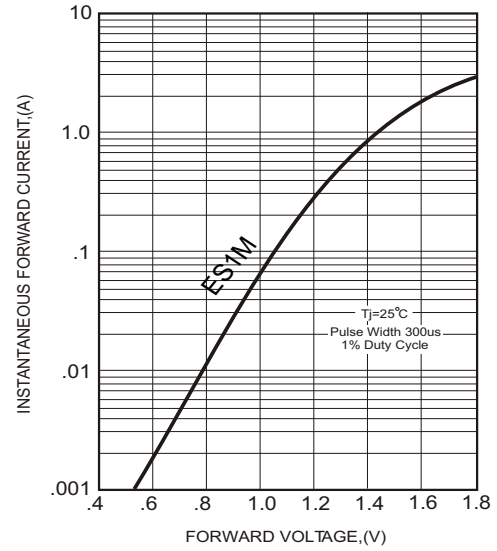
1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

**RATING AND CHARACTERISTIC CURVES**

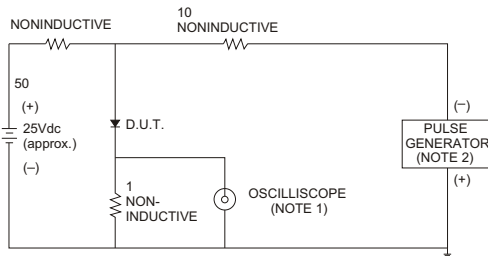
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.2-TYPICAL FORWARD CHARACTERISTICS**



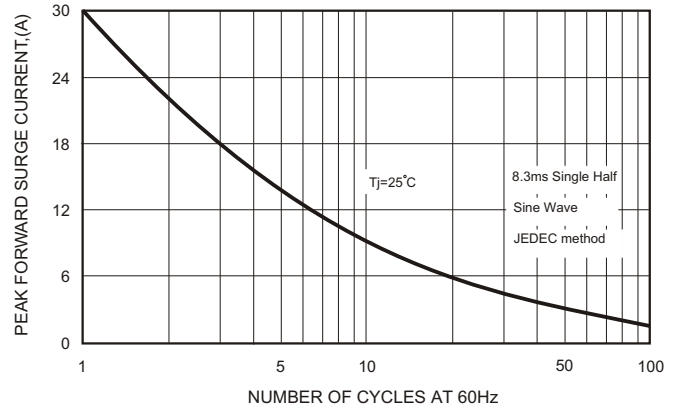
**FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



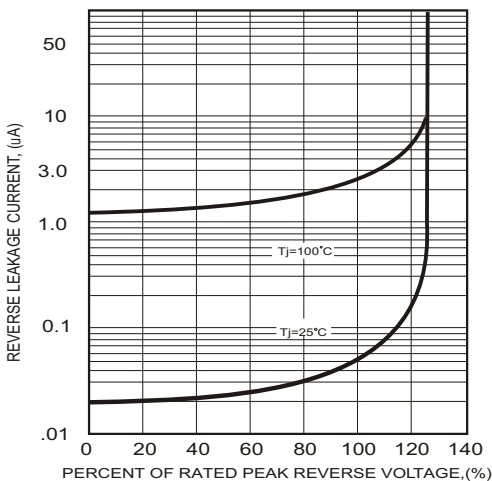
NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



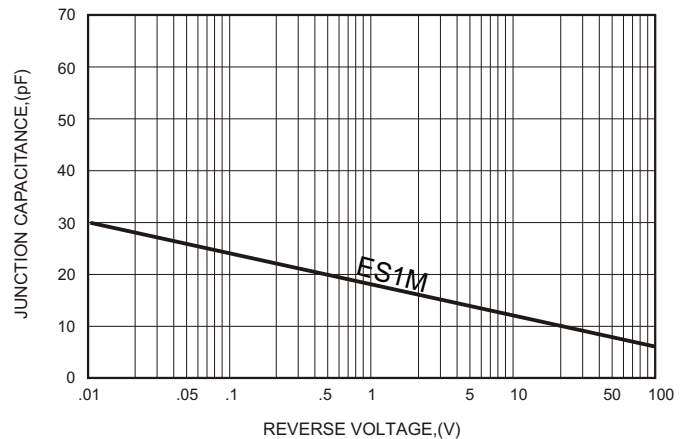
**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.6-TYPICAL JUNCTION CAPACITANCE**



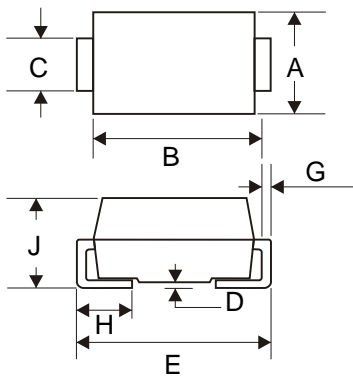
**Soldering parameters**

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

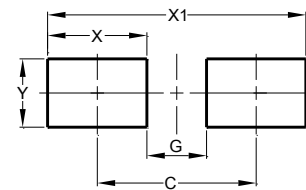


**Package Dimensions & Suggested Pad Layout**

**SMA**

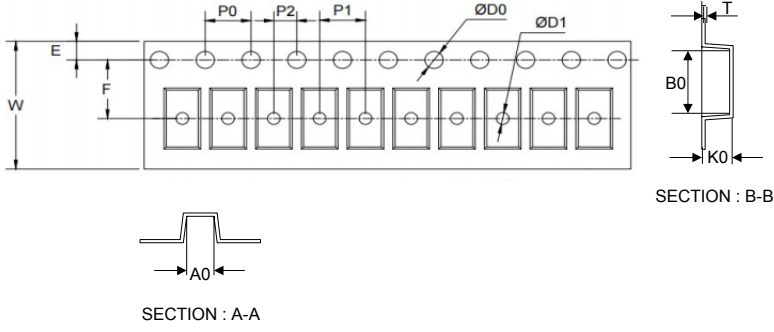
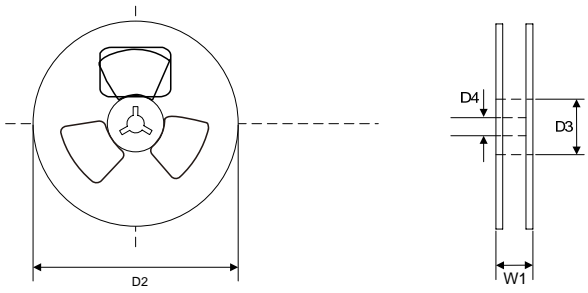
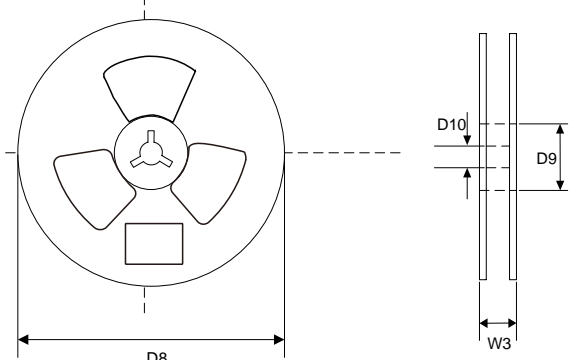


SMA		
Dim	Min	Max
A	2.40	2.79
B	3.99	4.50
C	1.32	1.47
D	-	0.20
E	4.93	5.28
G	0.15	0.31
H	0.76	1.52
J	1.98	2.29
All Dimensions in mm		



Dimensions	Value (in mm)
C	4.20
G	1.90
X	2.30
X1	6.50
Y	2.00

Tape & reel specification

Tape	Symbol	Dimension (mm)
	P0	4.00±0.20
	P1	4.00±0.20
	P2	2.00±0.20
	D0	1.60±0.20
	D1	1.60±0.20
	E	1.75±0.20
	F	5.50±0.15
	W	12.00±0.25
	A0	2.75±0.20
	B0	5.25±0.20
	K0	2.45±0.25
	T	0.20±0.10
	7" Reel	D2
	D3	55.0Min.
	D4	14.0±2.5
	W1	14.0±2.5
	Quantity: 2000PCS	
13" Reel	D8	330.0±5.0
	D9	73.0Min.
	D10	14.0±2.5
	W3	14.0±2.5
	Quantity: 5000PCS	