

FEATURES

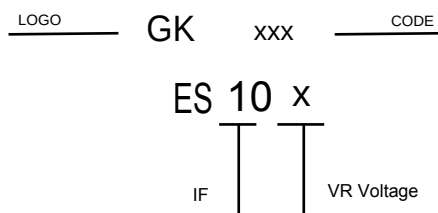
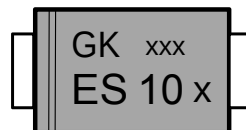
- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Fast switching speed

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: 0.21 grams



VOLTAGE RANGE
50 to 600 Volts
CURRENT
10.0 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	ES10A	ES10B	ES10C	ES10D	ES10E	ES10G	ES10J	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current	10.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	175							A
Maximum Instantaneous Forward Voltage at 10.0A	0.95				1.25		1.75	V
Maximum DC Reverse Current Ta=25°C	5				μA			
at Rated DC Blocking Voltage Ta=100°C	500				μA			
Maximum Reverse Recovery Time (Note 1)	35							nS
Typical Junction Capacitance (Note 2)	60				40		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

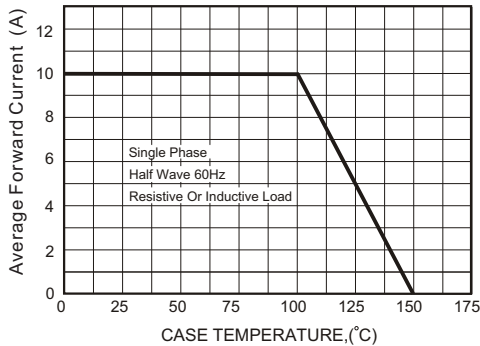


FIG.2-TYPICAL FORWARD CHARACTERISTICS

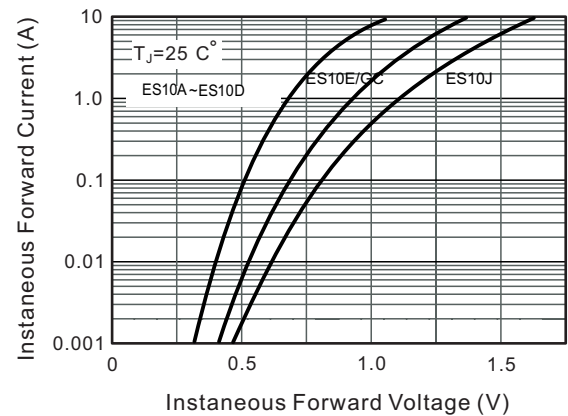
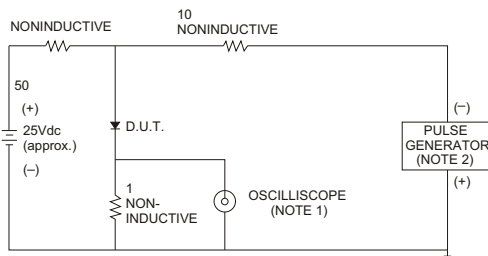


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

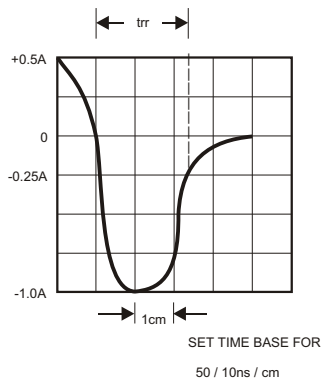


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

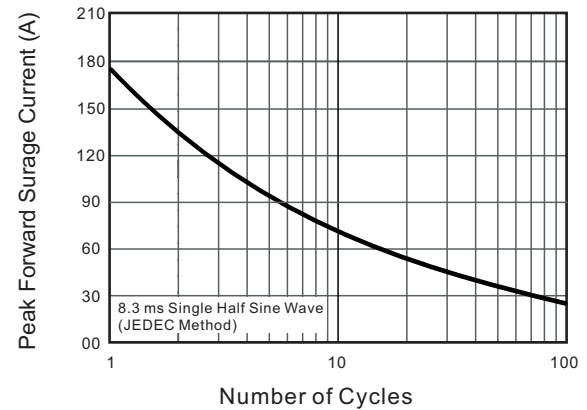


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

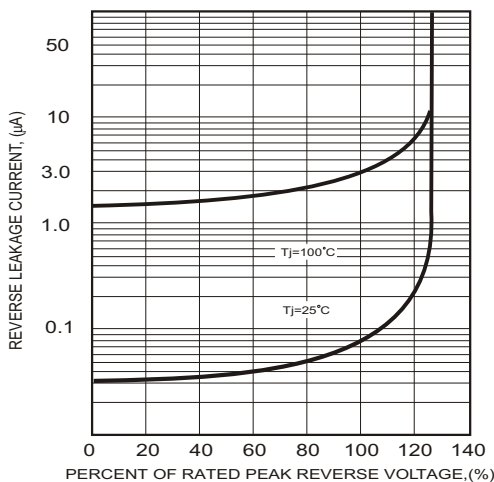
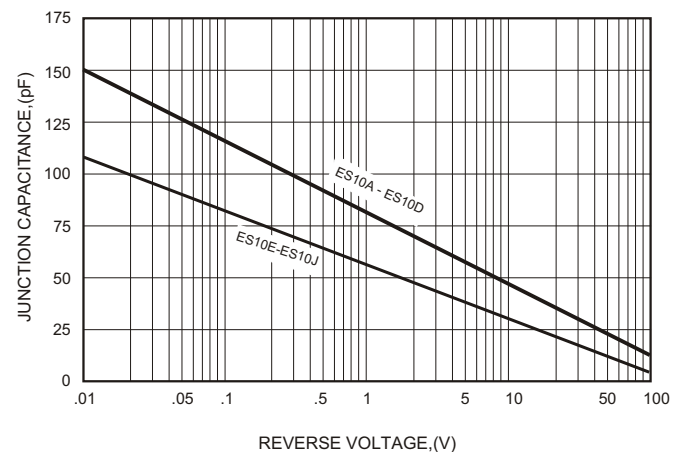
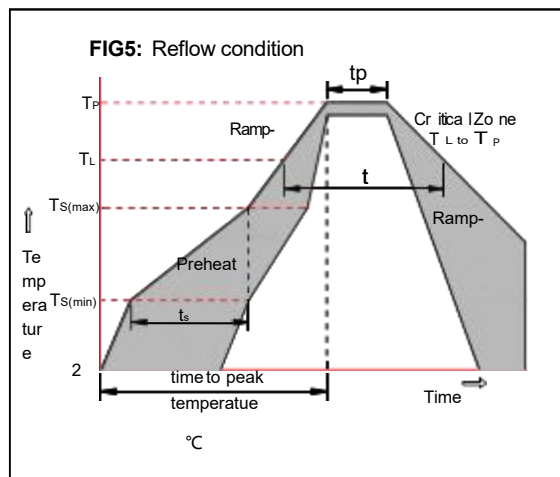


FIG.6-TYPICAL JUNCTION CAPACITANCE



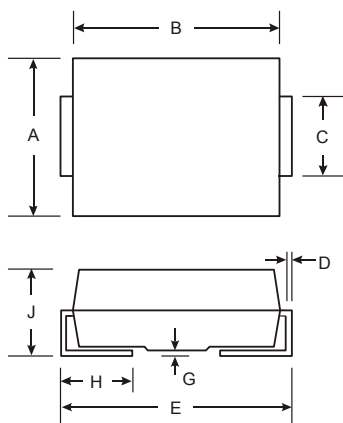
Soldering parameters

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

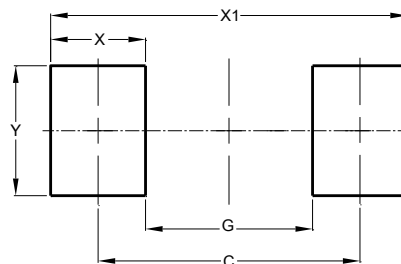


Package Dimensions & Suggested Pad Layout

SMC

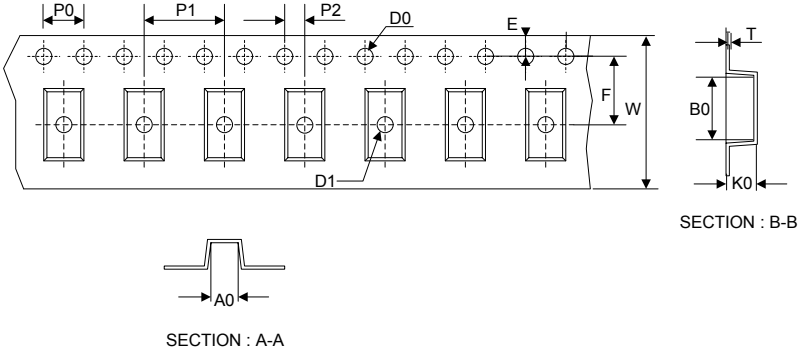
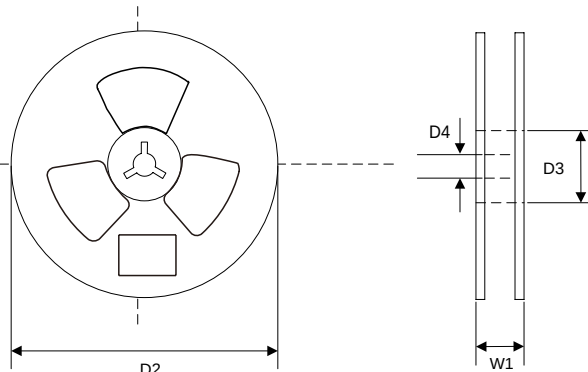


SMC		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.15
D	0.15	0.31
E	7.75	8.13
G		0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		



Dimensions	Value (in mm)
C	7.60
G	4.10
X	3.50
X1	11.10
Y	4.50

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	8.00±0.20
		P2	2.00±0.20
		D0	1.60±0.20
		D1	1.60±0.20
		E	1.75±0.20
		F	7.50±0.20
		W	16.00±0.20
		A0	6.30±0.20
		B0	8.20±0.20
		K0	2.60±0.20
		T	0.23±0.10
		D2	330.0±5.0
13" Reel			
		D3	73Min.
		D4	16.0±2.5
		W1	20.0±2.0
		Quantity: 3000PCS	