

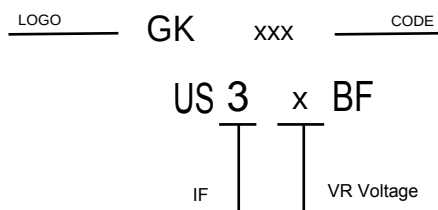
FEATURES

- * 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

VOLTAGE RANGE
50 to 1000 Volts
CURRENT
3.0 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	US3ABF	US3BBF	US3DBF	US3EBF	US3GBF	US3JBF	US3KBF	US3MBF	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current	3.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	100								A
Maximum Instantaneous Forward Voltage at 3.0A	1.0			1.3		1.85			V
Maximum DC Reverse Current Ta=25°C	10								μA
at Rated DC Blocking Voltage Ta=100°C	200								μA
Maximum Reverse Recovery Time (Note 1)	50					75			nS
Typical Junction Capacitance (Note 2)	75								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

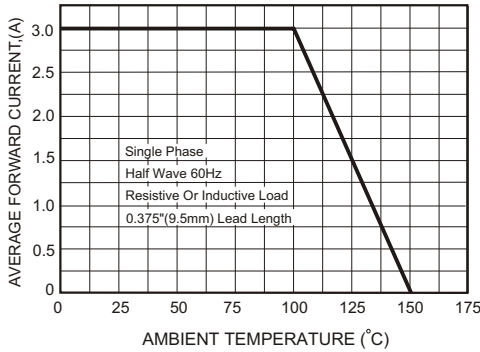
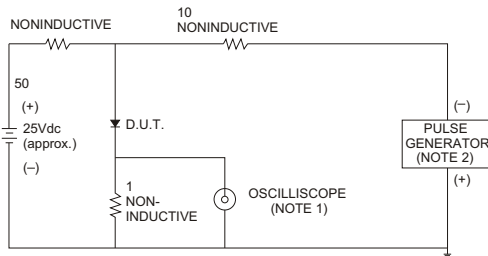


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

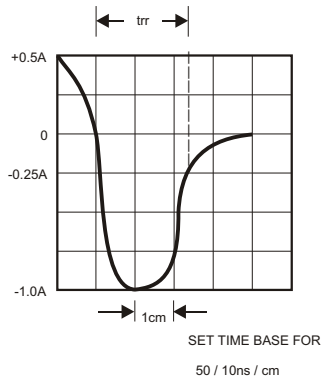


FIG.2-TYPICAL FORWARD CHARACTERISTICS

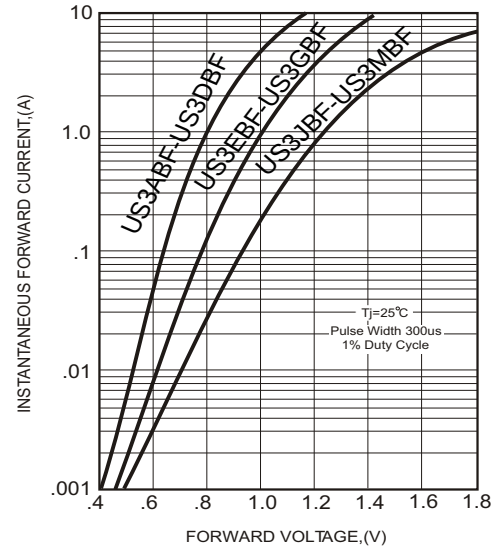


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

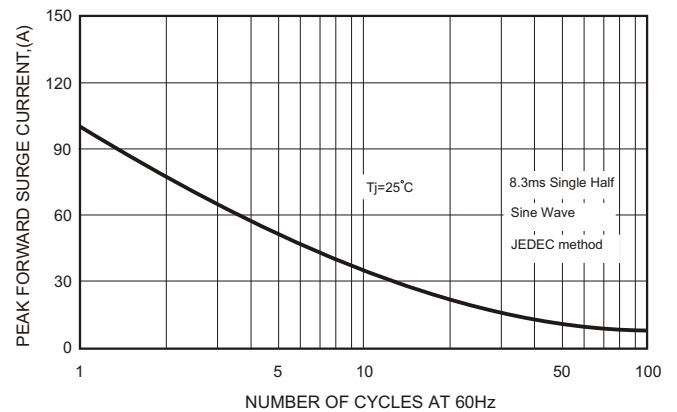


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

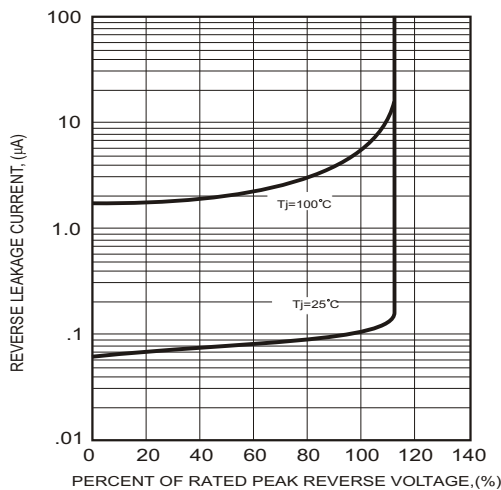
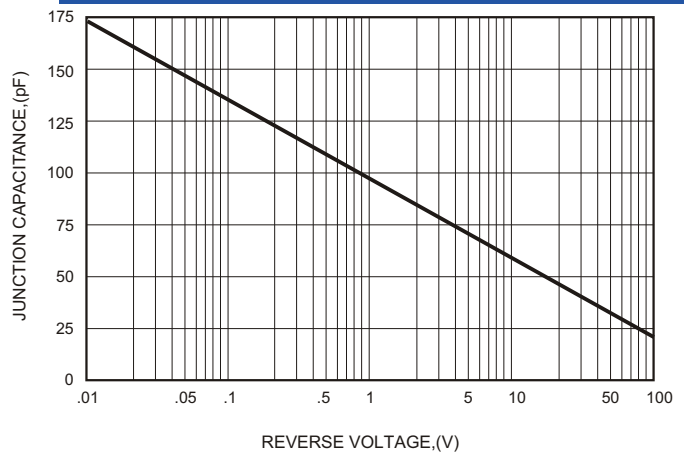
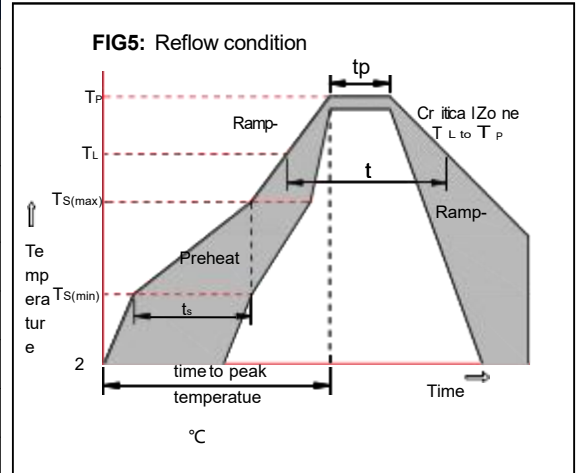


FIG.6-TYPICAL JUNCTION CAPACITANCE



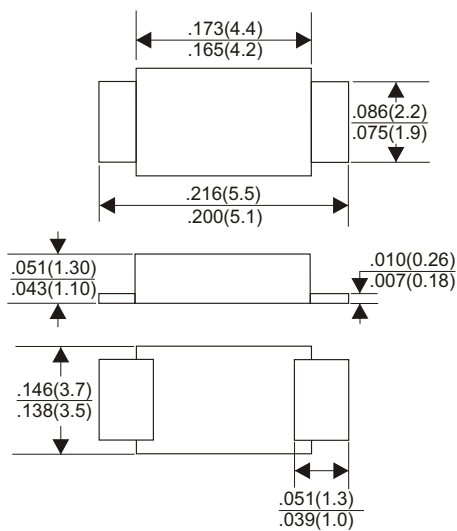
Soldering parameters

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

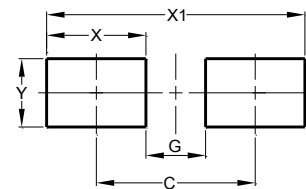


Package Dimensions & Suggested Pad Layout

SMBF

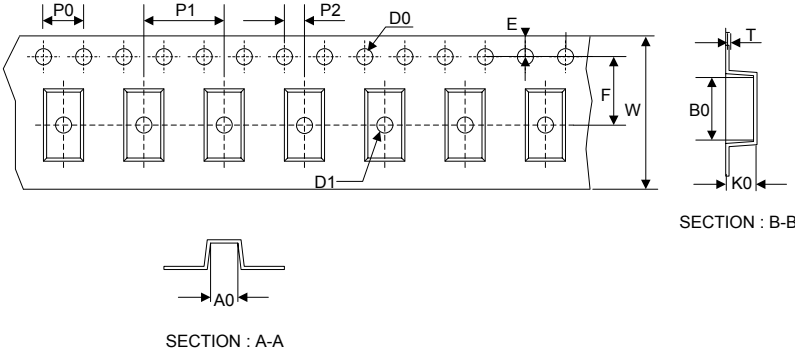
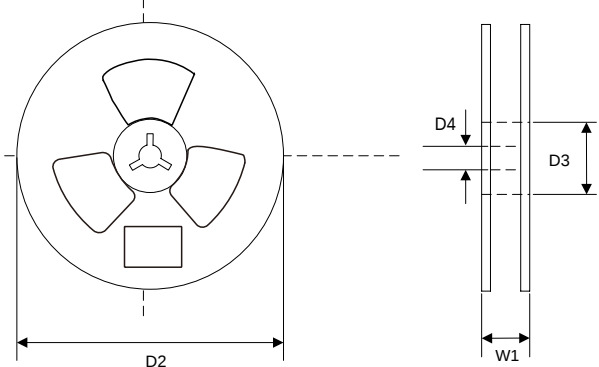


Dimensions in inches and (millimeters)



Dimensions	Value (in mm)
C	4.60
G	2.50
X	2.10
X1	6.70
Y	2.50

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	8.00±0.20
		P2	2.00±0.20
		D0	1.55±0.15
		D1	1.55±0.15
		E	1.75±0.20
		F	5.50±0.05
		W	12.00±0.10
		A0	2.93±0.25
		B0	5.00±0.25
		K0	1.45±0.20
		T	0.25±0.10
		D2	330.0±5.0
		D3	73.0Min.
13" Reel		D4	14.0±2.5
		W1	16.0±2.5
		Quantity: 5000PCS	