

FEATURES

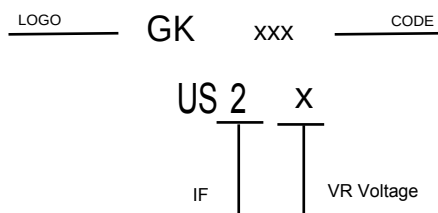
- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Fast switching speed

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: 0.063 gram



VOLTAGE RANGE
50 to 1000 Volts
CURRENT
2.0 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	US2A	US2B	US2D	US2E	US2G	US2J	US2K	US2M	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	2.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	60								A
Maximum Instantaneous Forward Voltage at 2.0A	1.0			1.3		1.85			V
Maximum DC Reverse Current Ta=25°C	5.0								μA
at Rated DC Blocking Voltage Ta=100°C	150								μA
Maximum Reverse Recovery Time (Note 1)	50					70			nS
Typical Junction Capacitance (Note 2)	30								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

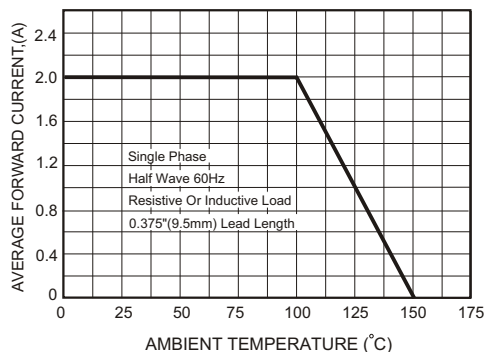
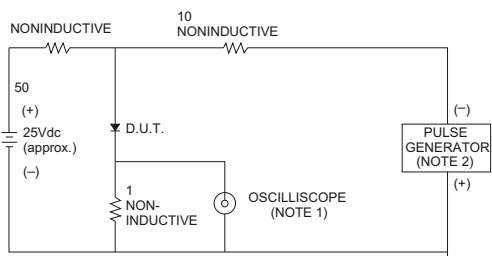


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

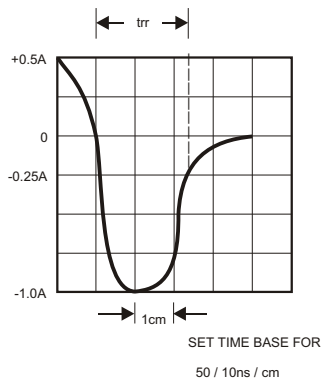


FIG.2-TYPICAL FORWARD CHARACTERISTICS

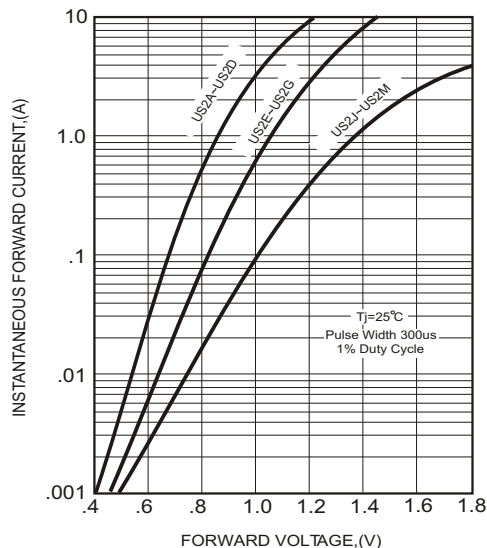


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

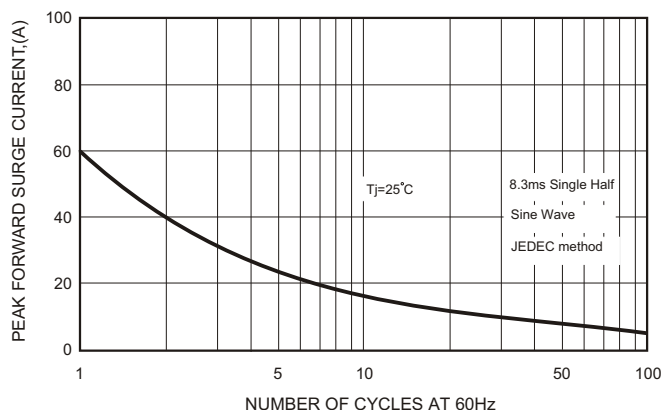


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

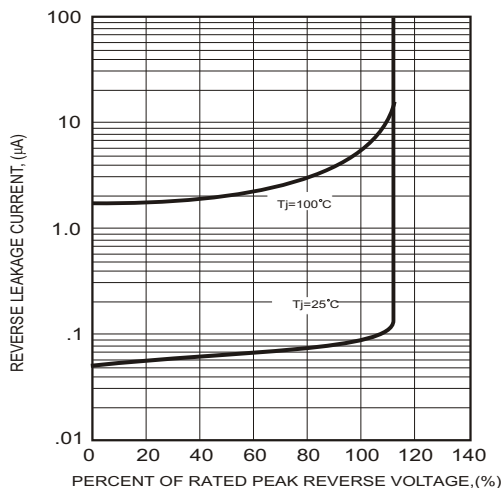
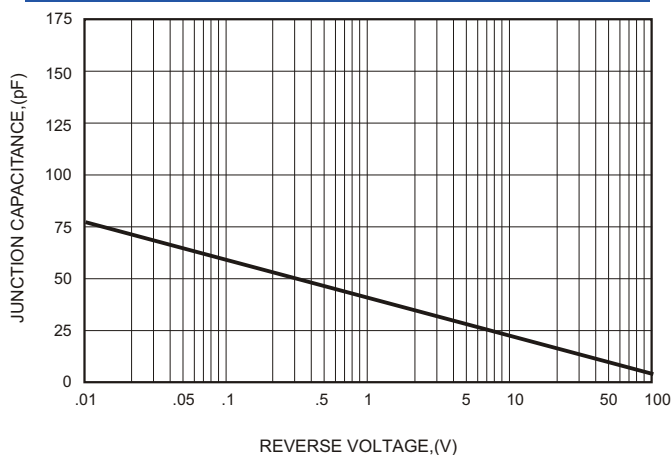


FIG.6-TYPICAL JUNCTION CAPACITANCE



Soldering parameters

FIG5: Reflow condition

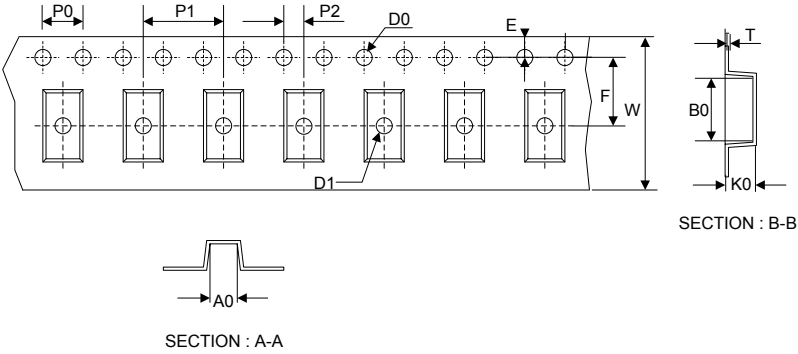
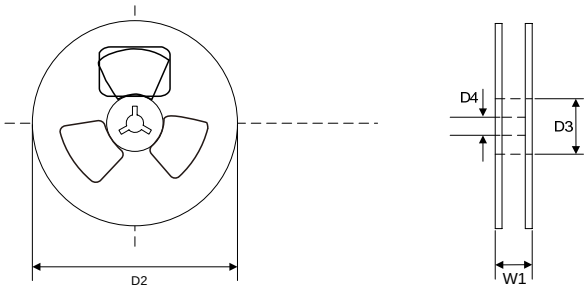
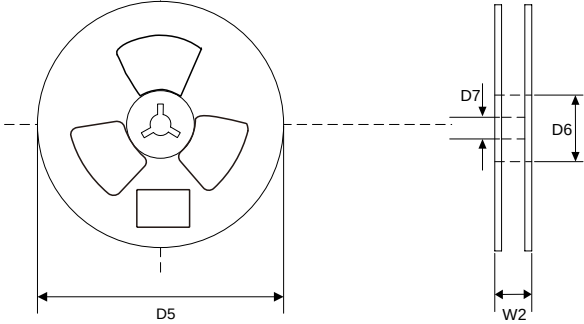
The graph illustrates the temperature profile for a reflow condition. The y-axis represents Temperature (°C) and the x-axis represents Time. The profile starts at a minimum temperature $T_{S(min)}$, rises through a preheat phase (duration t_s) to a ramp phase, then levels off at a peak temperature T_P for a dwell time t_p . The total time from $T_{S(min)}$ to T_P is t . The graph also indicates a maximum temperature $T_{S(max)}$ and a critical zone between T_L and T_P .

Package Dimensions & Suggested Pad Layout

The drawing consists of two views of a mechanical part. The top view shows a rectangular block with a central rectangular hole. Dimensions are labeled: A is the height of the block, B is the width of the block, C is the width of the central hole, and D is the height of the central hole. The bottom view shows the part from below, revealing a trapezoidal shape with a central rectangular hole. Dimensions are labeled: E is the total width, F is the width of the central hole, G is the height of the central hole, H is the height of the side flange, I is the height of the central hole, and J is the height of the side flange.

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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	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
		D2	176.0±5.0
		D3	55.0Min.
		D4	14.0±2.5
7" Reel		W1	14.0±2.5
		Quantity: 2000PCS	
		D5	276.0±5.0
		D6	71.0Min.
		D7	14.0±2.5
		W2	14.0±2.5
11" Reel		Quantity: 5000PCS	
		D8	330.0±5.0
		D9	73.0Min.
		D10	14.0±2.5
		W3	14.0±2.5
		Quantity: 5000PCS	
13" Reel			
