

FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Low forward voltage drop

MECHANICAL DATA

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

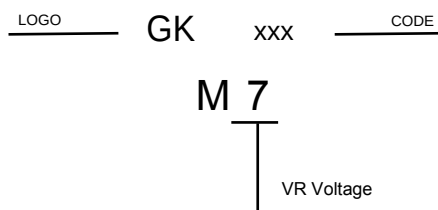
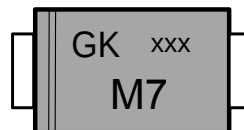


VOLTAGE RANGE

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	1N4007	UNITS
Maximum Recurrent Peak Reverse Voltage	1000	
Maximum RMS Voltage	700	V
Maximum DC Blocking Voltage	1000	
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	1.0	V
Maximum DC Reverse Current Ta=25°C	2.0	μA
at Rated DC Blocking Voltage Ta=100°C	200	μA
Typical Junction Capacitance (Note 1)	18	pF
Typical Thermal Resistance R JA (Note 2)	65	°C/W
Operating and Storage Temperature Range Tj, Tstg	-65 — +150	°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

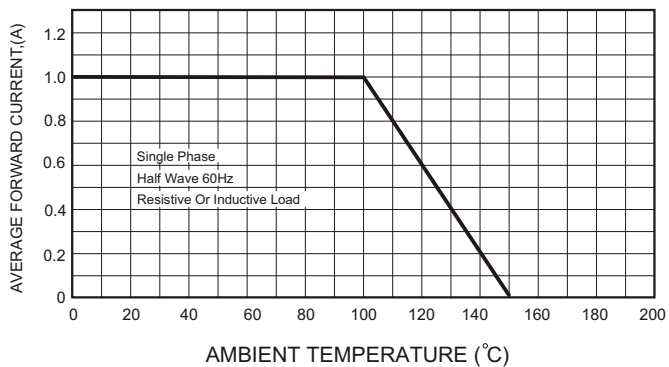


FIG.2-TYPICAL FORWARD CHARACTERISTICS

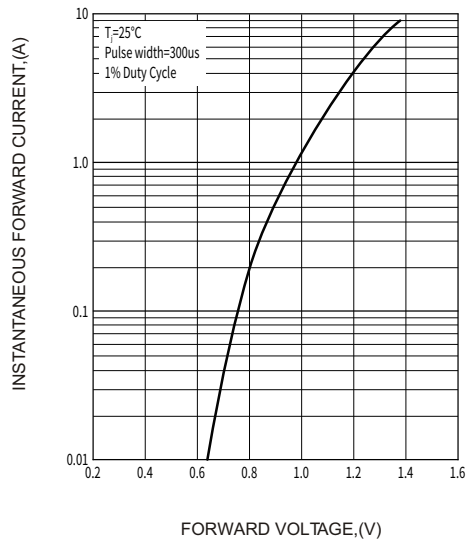


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

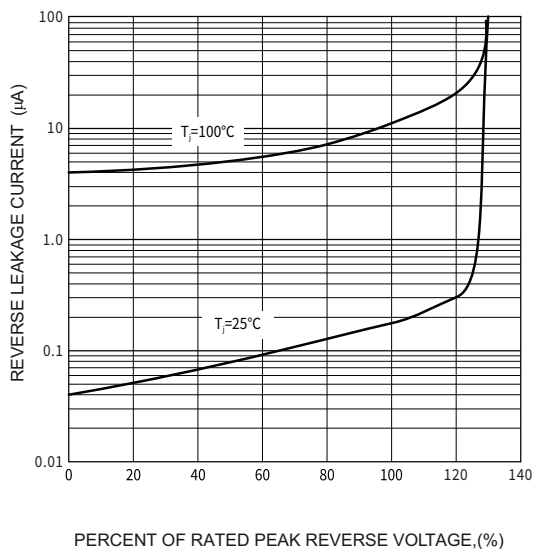


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

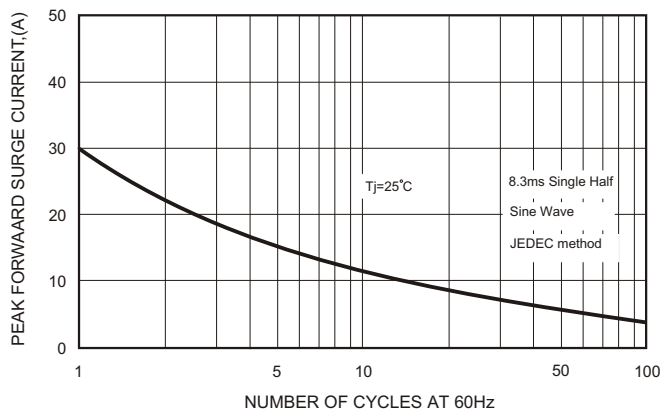
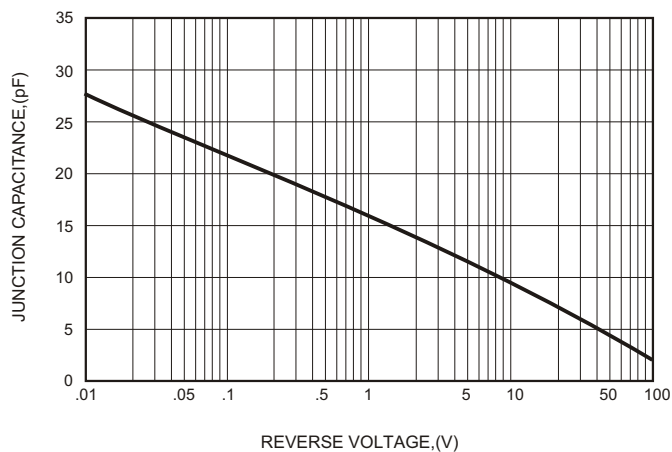
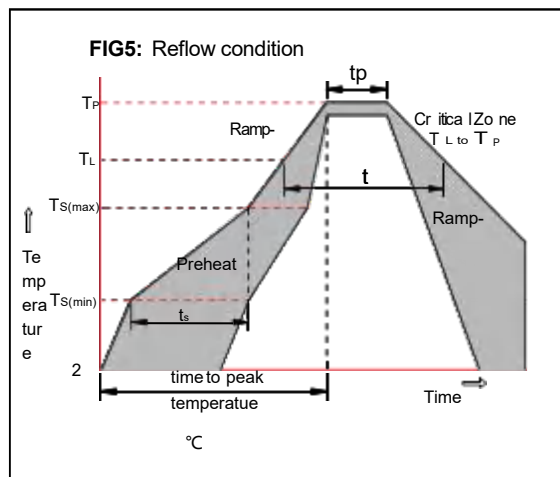


FIG.5-TYPICAL JUNCTION CAPACITANCE



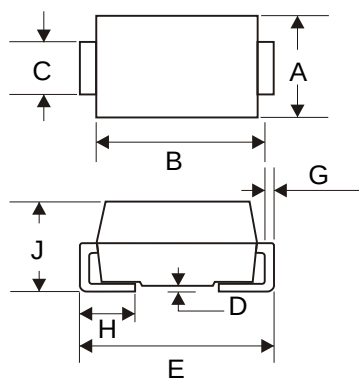
Soldering parameters

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

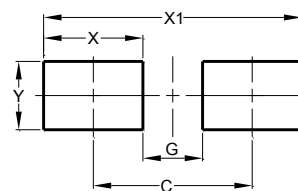


Package Dimensions & Suggested Pad Layout

SMA

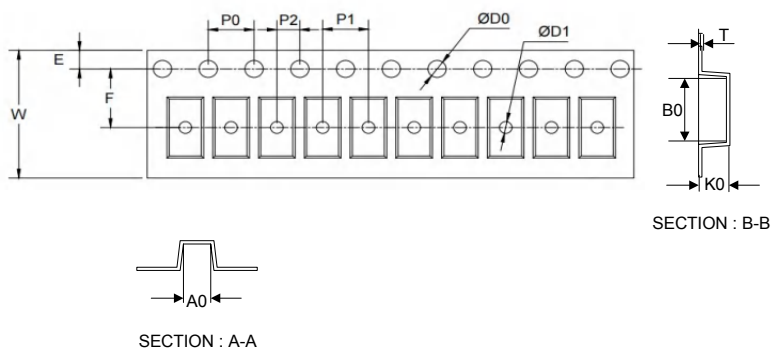


SMA		
Dim	Min	Max
A	2.40	2.79
B	3.99	4.50
C	1.32	1.47
D	-	0.20
E	4.93	5.28
G	0.15	0.31
H	0.76	1.52
J	1.98	2.29
All Dimensions in mm		



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

Tape



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

Technical drawing of a fan showing front and side views. The front view (left) shows a circular fan with three blades. The diameter of the fan housing is labeled $D2$. The side view (right) shows the fan's profile. The total height of the fan housing is labeled $D3$. The height of the fan blades is labeled $D4$. The width of the fan housing is labeled $W1$.

D2	176.0±5.0
D3	55.0Min.
D4	14.0±2.5
W1	14.0±2.5
Quantity: 2000PCS	

Technical drawing of a circular object, likely a fan or propeller, showing top and side views with dimensions.

Top View (Left): A circular object with three blades. The overall diameter is labeled $D8$. The central hub has a diameter labeled $D10$. The blades are arranged radially around the hub. A dashed line indicates the center of the object.

Side View (Right): A cross-sectional view showing the thickness of the object. The total thickness is labeled $D9$. The width of the central hub is labeled $W3$. The blades are shown as thin, curved sections extending from the hub.

D8	330.0±5.0
D9	73.0Min.
D10	14.0±2.5
W3	14.0±2.5
Quantity: 5000PCS	