

FEATURES

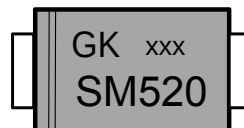
- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Low forward voltage drop

MECHANICAL DATA

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



VOLTAGE RANGE
2000 Volts
CURRENT
1.5 Ampere



____ LOGO GK xxx CODE ____

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%.

Parameter	Symbols	SM520	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	2000	V
Maximum Average Forward Rectified Current at $T_C = 100\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	1.5	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40	A
Maximum Instantaneous Forward Voltage at 1.5A	V_F	1.15	V
Maximum Reverse Current $T_J = 25\text{ }^{\circ}\text{C}$ $T_J = 125\text{ }^{\circ}\text{C}$	I_R	5 500	μA
Typical Junction Capacitance ¹⁾	C_j	20	pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	95	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

Measured at 1 MHz and applied reverse voltage of 4 V D.C
P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

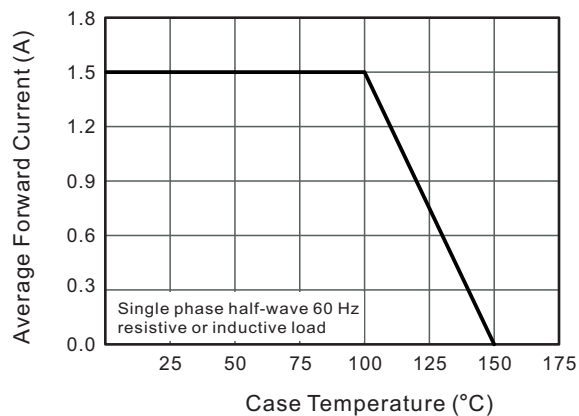


FIG.2-TYPICAL FORWARD CHARACTERISTICS

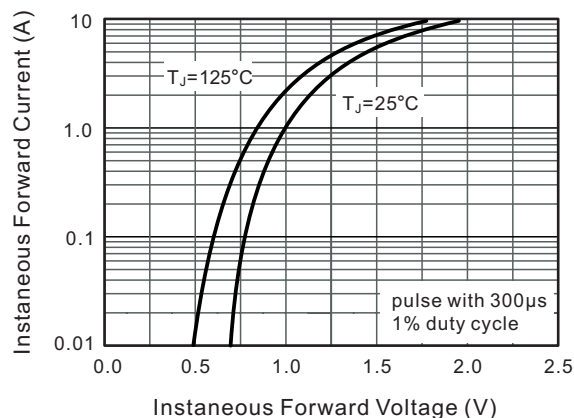


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

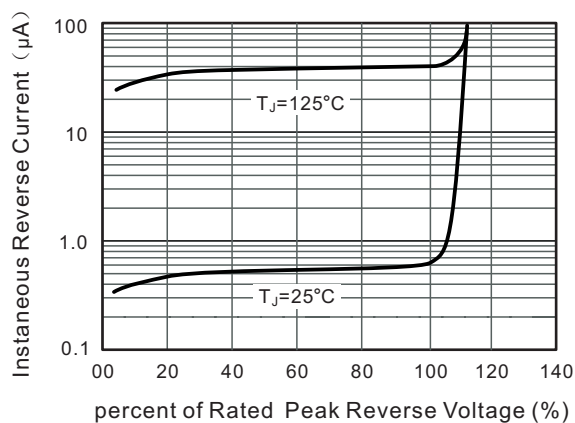


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

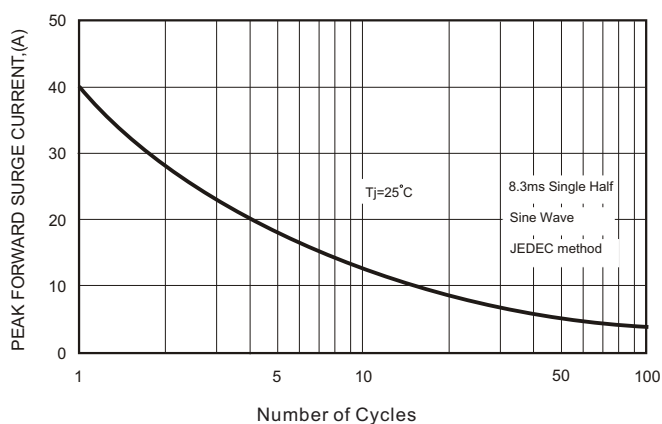
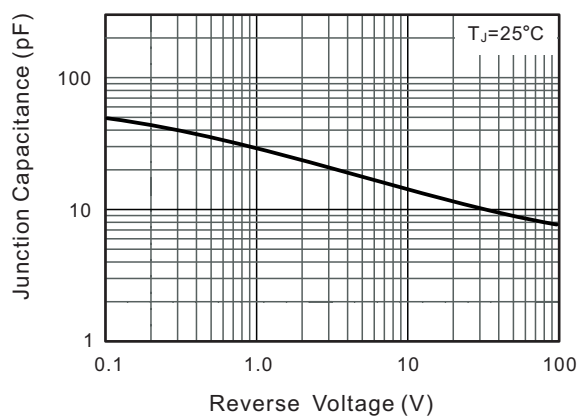
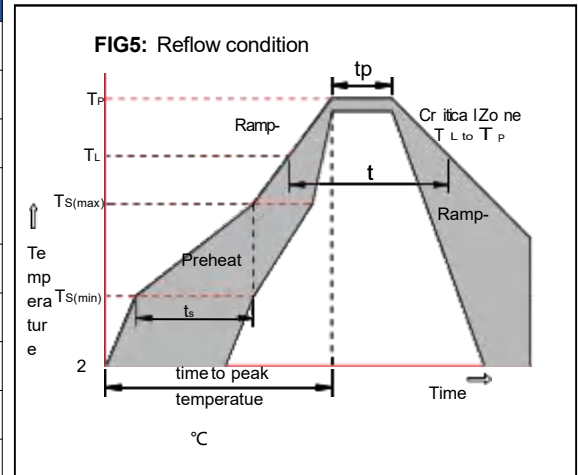


FIG.5-TYPICAL JUNCTION CAPACITANCE



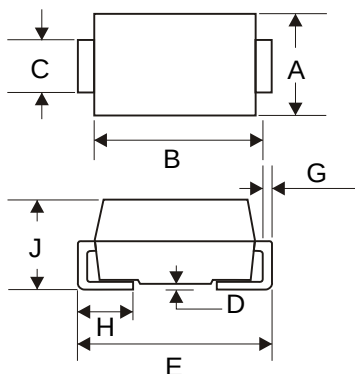
Soldering parameters

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

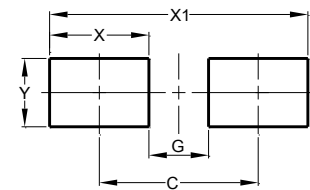


Package Dimensions & Suggested Pad Layout

SMA

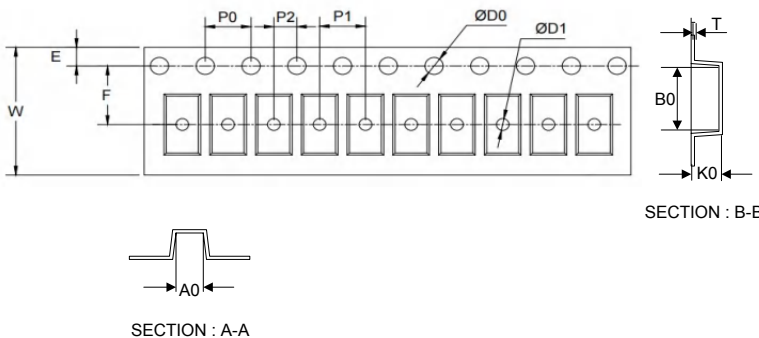
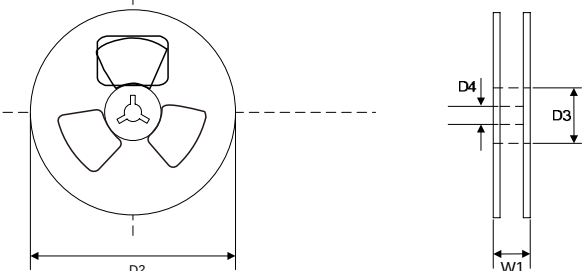
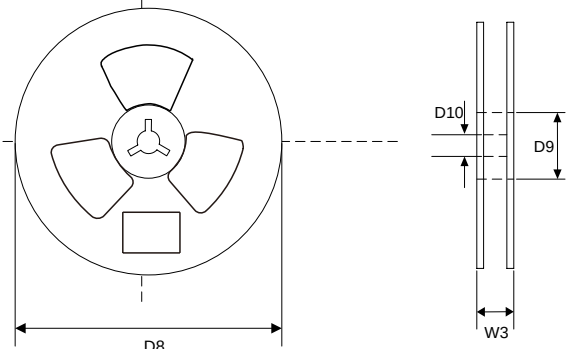


SMA		
Dim	Min	Max
A	2.40	2.79
B	3.99	4.50
C	1.32	1.47
D	-	0.20
E	4.93	5.28
G	0.15	0.31
H	0.76	1.52
J	1.98	2.29
All Dimensions in mm		



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

Tape & reel specification

Tape  SECTION : A-A SECTION : B-B	<table> <tr> <th>Symbol</th><th>Dimension (mm)</th></tr> <tr><td>P0</td><td>4.00±0.20</td></tr> <tr><td>P1</td><td>4.00±0.20</td></tr> <tr><td>P2</td><td>2.00±0.20</td></tr> <tr><td>D0</td><td>1.60±0.20</td></tr> <tr><td>D1</td><td>1.60±0.20</td></tr> <tr><td>E</td><td>1.75±0.20</td></tr> <tr><td>F</td><td>5.50±0.15</td></tr> <tr><td>W</td><td>12.00±0.25</td></tr> <tr><td>A0</td><td>2.75±0.20</td></tr> <tr><td>B0</td><td>5.25±0.20</td></tr> <tr><td>K0</td><td>2.45±0.25</td></tr> <tr><td>T</td><td>0.20±0.10</td></tr> </table>	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
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 	<table> <tr><td>D2</td><td>176.0±5.0</td></tr> <tr><td>D3</td><td>55.0Min.</td></tr> <tr><td>D4</td><td>14.0±2.5</td></tr> <tr><td>W1</td><td>14.0±2.5</td></tr> <tr><td colspan="2">Quantity: 2000PCS</td></tr> </table>	D2	176.0±5.0	D3	55.0Min.	D4	14.0±2.5	W1	14.0±2.5	Quantity: 2000PCS																	
D2	176.0±5.0																										
D3	55.0Min.																										
D4	14.0±2.5																										
W1	14.0±2.5																										
Quantity: 2000PCS																											
13" Reel 	<table> <tr><td>D8</td><td>330.0±5.0</td></tr> <tr><td>D9</td><td>73.0Min.</td></tr> <tr><td>D10</td><td>14.0±2.5</td></tr> <tr><td>W3</td><td>14.0±2.5</td></tr> <tr><td colspan="2">Quantity: 5000PCS</td></tr> </table>	D8	330.0±5.0	D9	73.0Min.	D10	14.0±2.5	W3	14.0±2.5	Quantity: 5000PCS																	
D8	330.0±5.0																										
D9	73.0Min.																										
D10	14.0±2.5																										
W3	14.0±2.5																										
Quantity: 5000PCS																											