

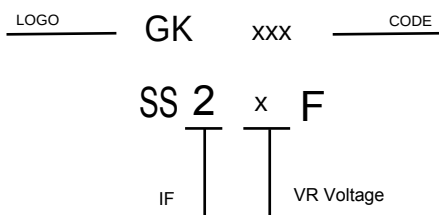
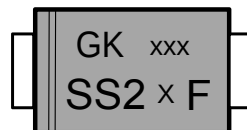
FEATURES

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026

VOLTAGE RANGE
40 to 60 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%.

Parameter	Symbols	SSL24F	SSL26F	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	60	V
Maximum RMS voltage	V_{RMS}	28	42	V
Maximum DC Blocking Voltage	V_{DC}	40	60	V
Maximum Average Forward Rectified Current at $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	2		A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	50		A
Maximum Instantaneous Forward Voltage at 2 A	V_F	0.45	0.52	V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100^\circ\text{C}$	I_R	0.5 10	0.3 5	mA
Typical Junction Capacitance ⁽¹⁾	C_j	170	140	pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	70		°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125		°C
Storage Temperature Range	T_{stg}	-55 ~ +150		°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

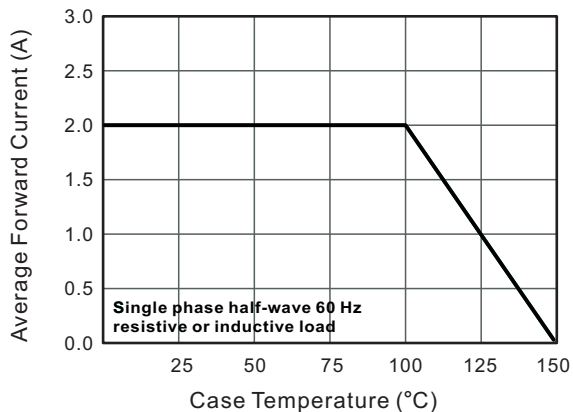


FIG.2-TYPICAL FORWARD CHARACTERISTICS

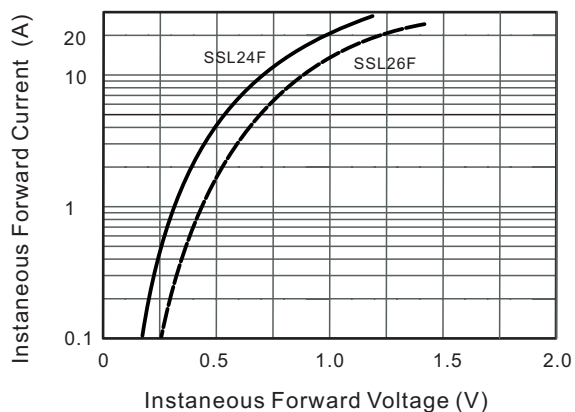


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

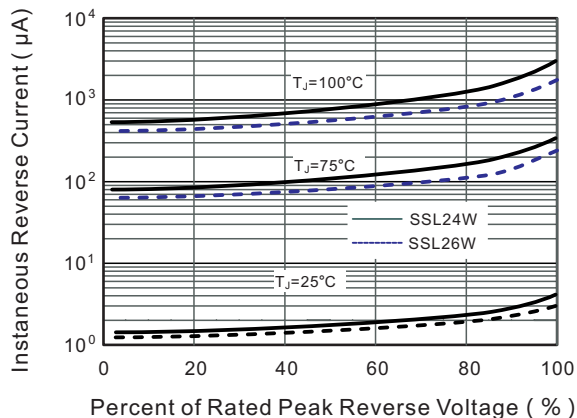


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

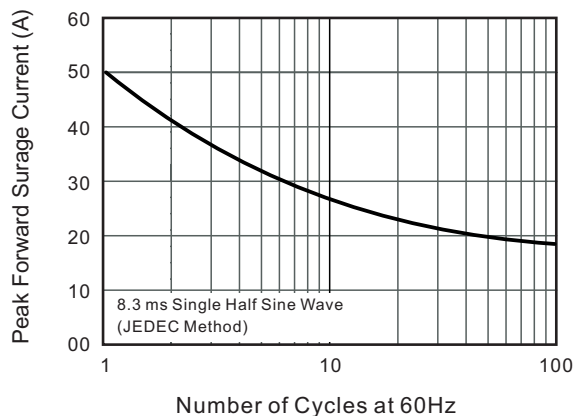
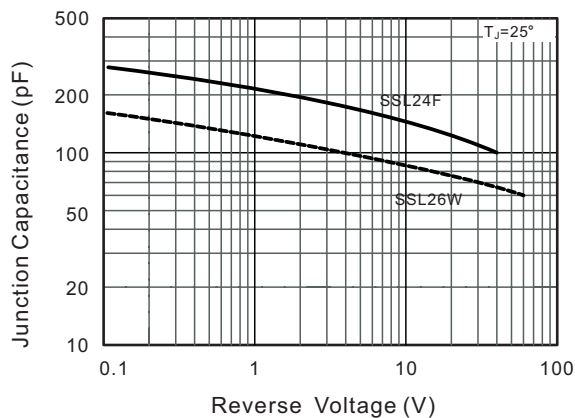
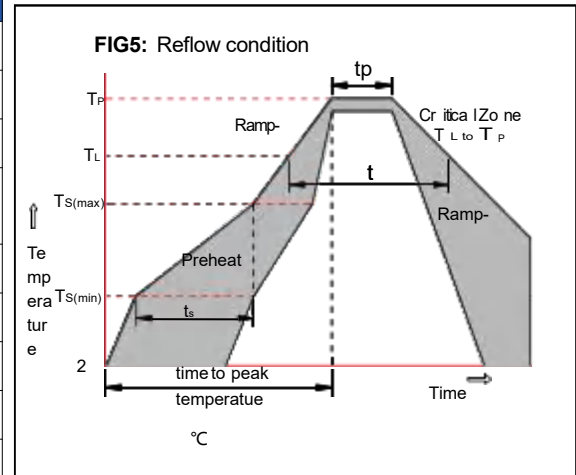


FIG.5-TYPICAL JUNCTION CAPACITANCE



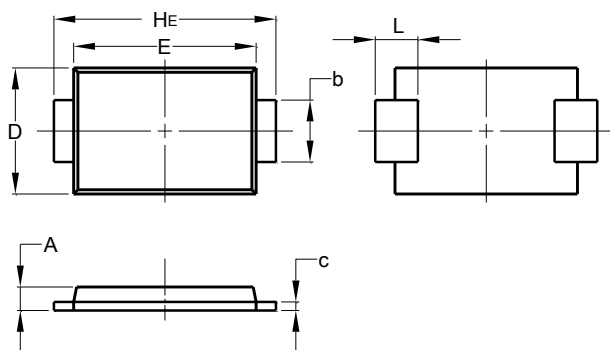
Soldering parameters

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

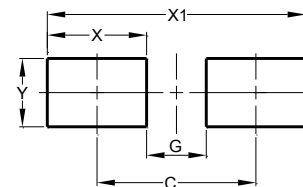


Package Dimensions & Suggested Pad Layout

SMAF

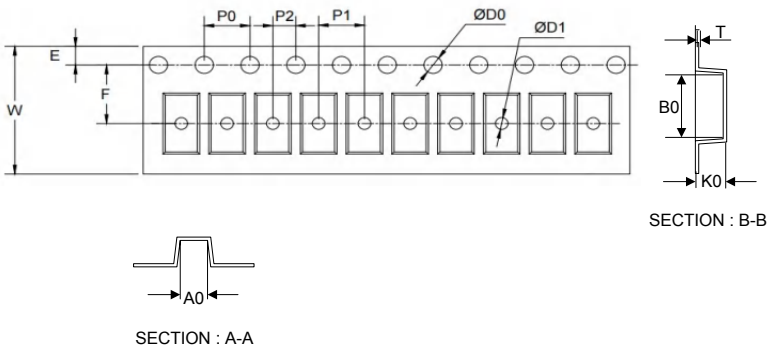
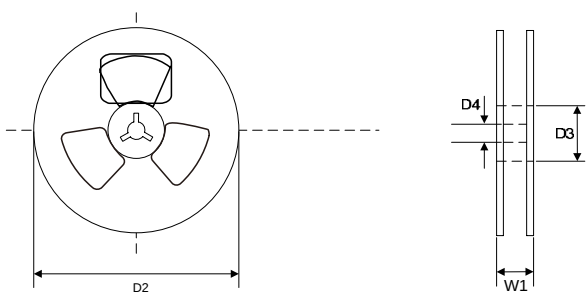
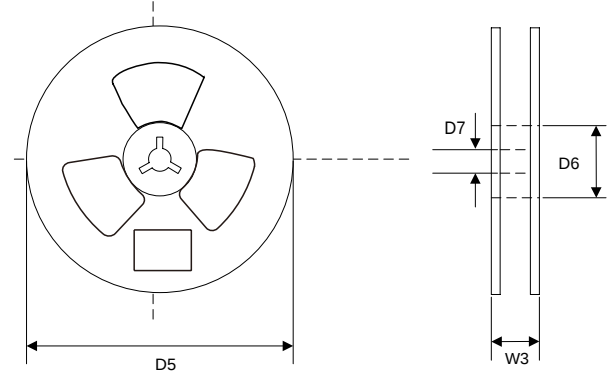


SMAF		
Dim	Min	Max
A	0.90	1.20
b	1.30	1.60
c	0.10	0.20
D	2.40	2.70
E	3.30	3.70
H _E	4.40	4.90
L	0.60	1.20
All Dimensions in mm		



Dimensions	Value (in mm)
C	3.80
G	2.20
X	1.60
X1	5.40
Y	1.70

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	2.00±0.20
		D0	1.55±0.25
		D1	1.55±0.25
		E	1.75±0.20
		F	5.50±0.20
		W	12.00±0.20
		A0	2.85±0.20
		B0	5.00±0.20
		K0	1.45±0.20
		T	0.26±0.10
7" Reel		D2	176.0±5.0
		D3	55.0Min.
		D4	14.0±2.5
		W1	14.0±2.5
		Quantity: 3000PCS	
13" Reel		D5	330.0±5.0
		D6	73.0Min.
		D7	14.0±2.5
		W2	14.0±2.5
		Quantity: 10000PCS	