

Primary Characteristics

I_F	2.0	A
V_{RRM}	20~200	V
I_{FSM}	50	A
V_F	0.55~0.95	V

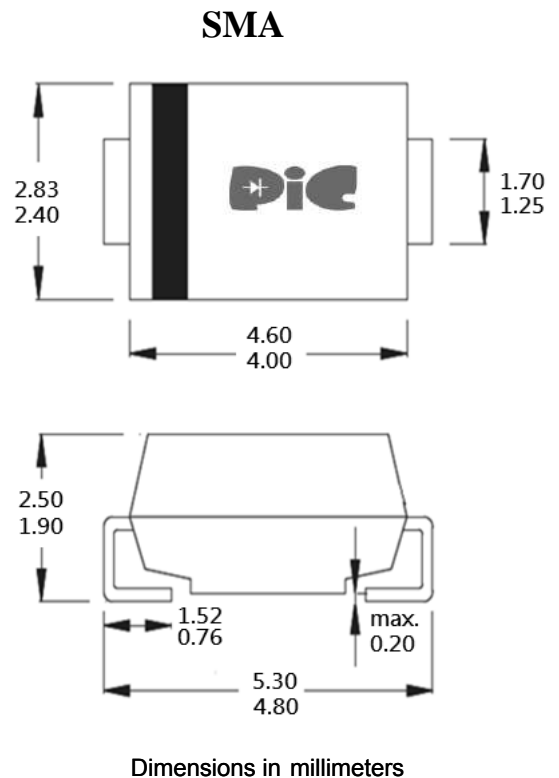
Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds terminals

Mechanical Data

- Case : SMA molded plastic body
- Terminals : Leads solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight: Approx. 0.068grams

Package Outline Dimensions



Maximum Ratings (TA=25°C unless otherwise noted)

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbol	SK22	SK23	SK24	SK25	SK26	SK28	SK210	SK215	SK220	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	Volts	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts	
Maximum average forward rectified current at Tl(see fig.1)	$I_{(AV)}$	2.0									Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0									Amps	
Maximum instantaneous forward voltage at 2.0A	V_F	0.55			0.7		0.85			0.95	Volts	
Maximum DC reverse current TA=25 °C at rated DC blocking voltage TA=100 °C	I_R	0.5						0.2			mA	
		10.0			5.0			2.0				
Typical junction capacitance (NOTE 1)	C_j	220			180						pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	75									°C/W	
Operating junction temperature range	T_j	-55 to +125					-55 to +150					°C
Storage temperature range	T_{STG}	-55 to +150									°C	

Notes:

- (1) Measured at 1MHz and applied reverse voltage of 4.0V D.C.
- (2) P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

Rating and Characteristics Curves

Fig. 1 Forward Current Derating Curve

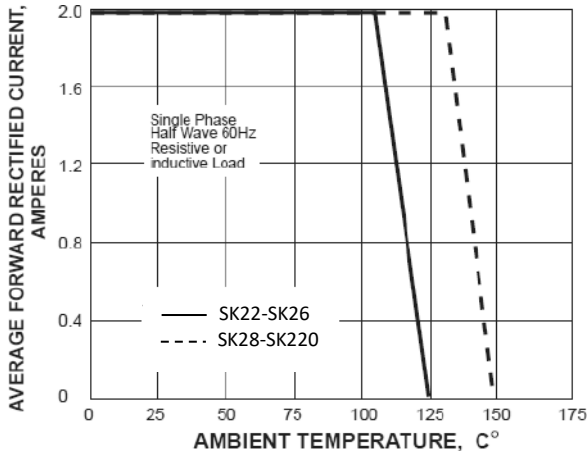


Fig. 2 Max. Non-Repetitive Peak Forward Surge Current

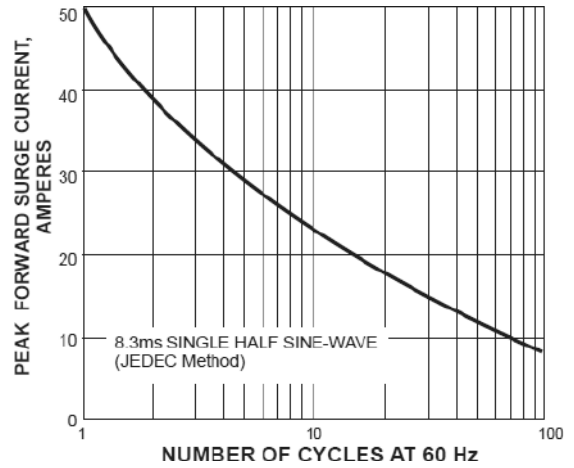


Fig. 3 Typical Instantaneous Forward Characteristics

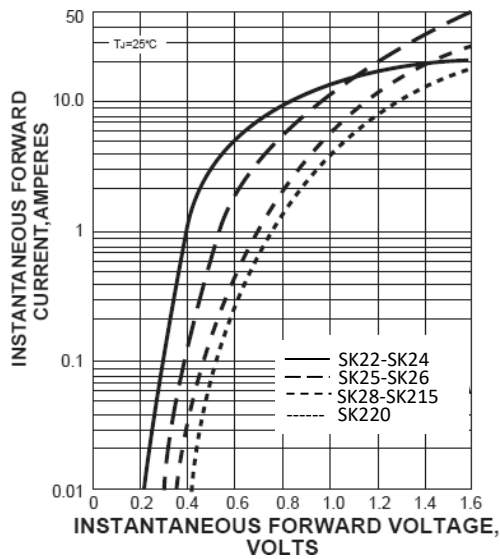


Fig. 4 Typical Reverse Characteristics

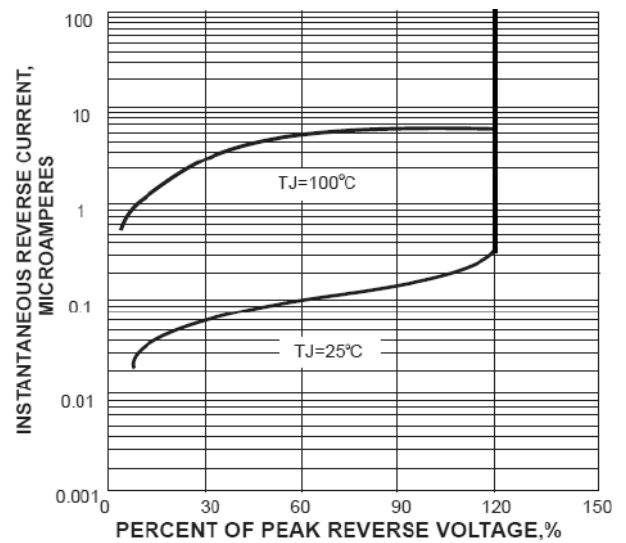


Fig. 5 Typical Junction Capacitance

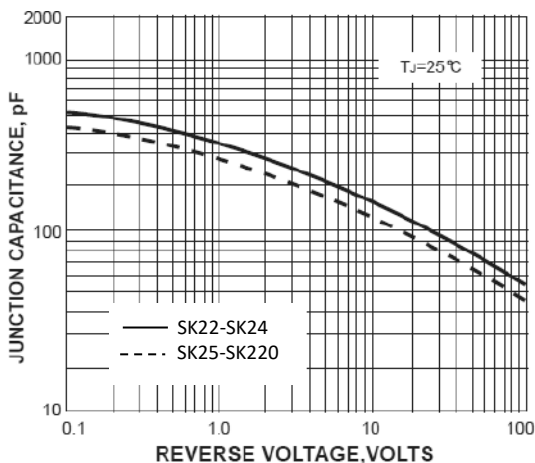
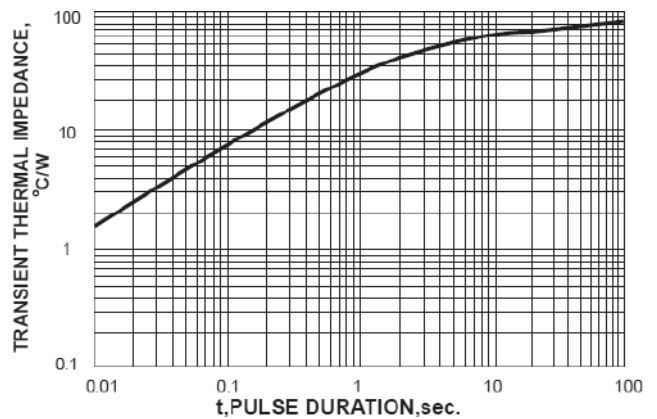
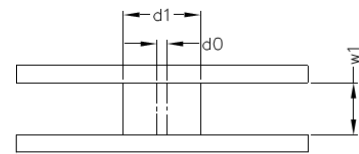
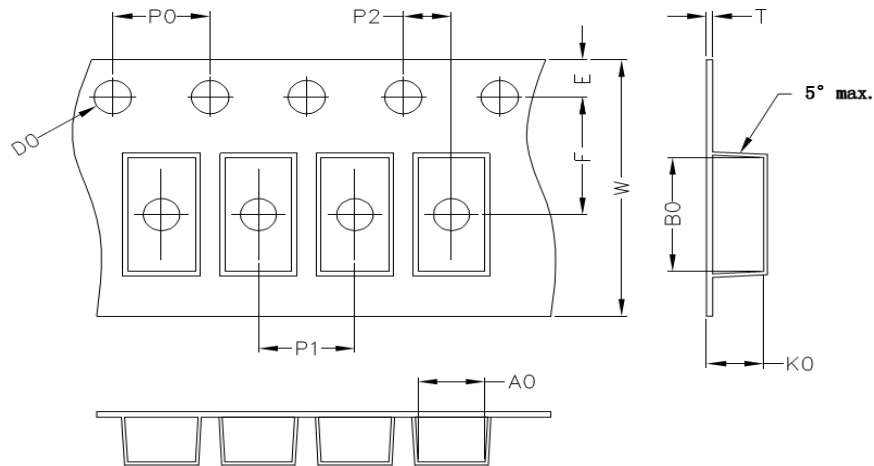


Fig. 6 Typical Transient Thermal Impedance



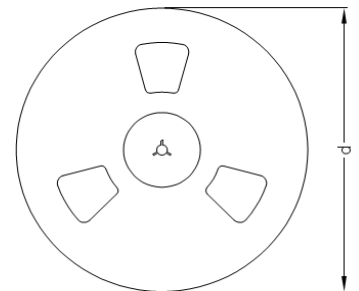
Packaging Specifications

Package	A0 (mm)	B0 (mm)	K0 (mm)	D0 (mm)	E (mm)	F (mm)	P0 (mm)	P1 (mm)	P2 (mm)	T (mm)	W (mm)
SMA	2.8±0.1	5.33±0.1	2.36±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	4.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMB	3.8±0.1	5.40±0.1	2.45±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	8.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMC	6.05±0.1	8.31±0.1	2.54±0.1	1.55±0.1	1.75±0.1	7.50±0.1	4.0±0.1	8.0±0.05	2±0.1	0.25±0.1	12±0.1

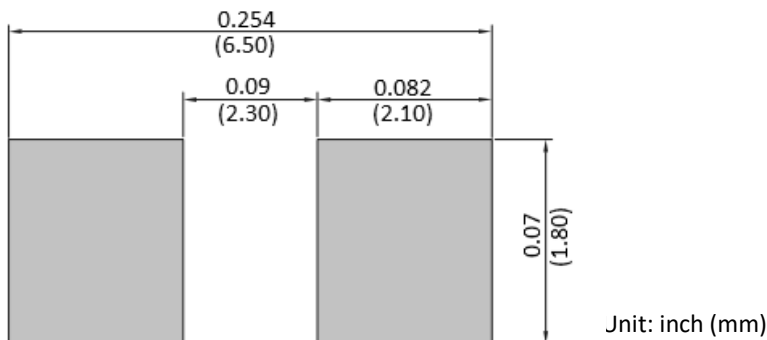


Package	D1 (mm)	D0 (mm)	W1 (mm)	D (mm)
SMA	75	13.5	13.5	330
SMB	75	13.5	13.5	330
SMC	75	13.5	17.0	330

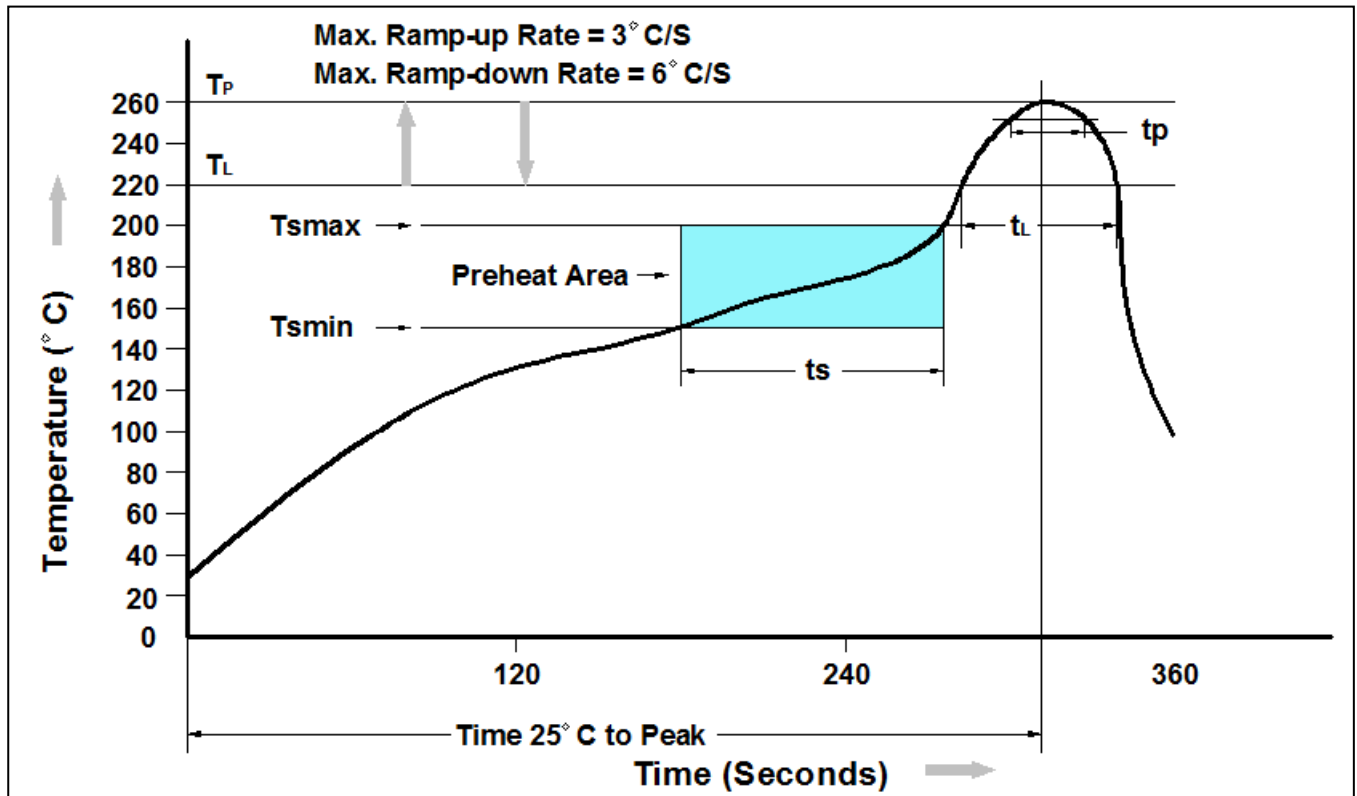
NOTE : The tolerance of reel is ±2mm



Pad Layout



Recommand IR Reflow Soldering Thermal Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T _{smin})	150°C
Temperature Max. (T _{smax})	200°C
Time (t _s) from (T _{smin} to T _{smax})	60-120 seconds
Average Ramp-up Rate (t _L to t _P)	3°C/second max.
Liquidous Temperature (T _L)	217°C
Time (t _L) Maintained Above (T _L)	60 – 150 seconds
Peak Temperature	260°C +0°C / -5°C
Time (t _P) within 5°C of actual Peak Temperature	30 seconds
Ramp-down Rate (T _P to T _L)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

Ordering Information

Part Number	Description	Quantity
SK22~SK220	SMA Reel	5000 pcs

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