

### Primary Characteristics

$I_F$	1	A
$V_{RRM}$	20~200	V
$I_{FSM}$	30	A
$V_F$	0.55~0.90	V

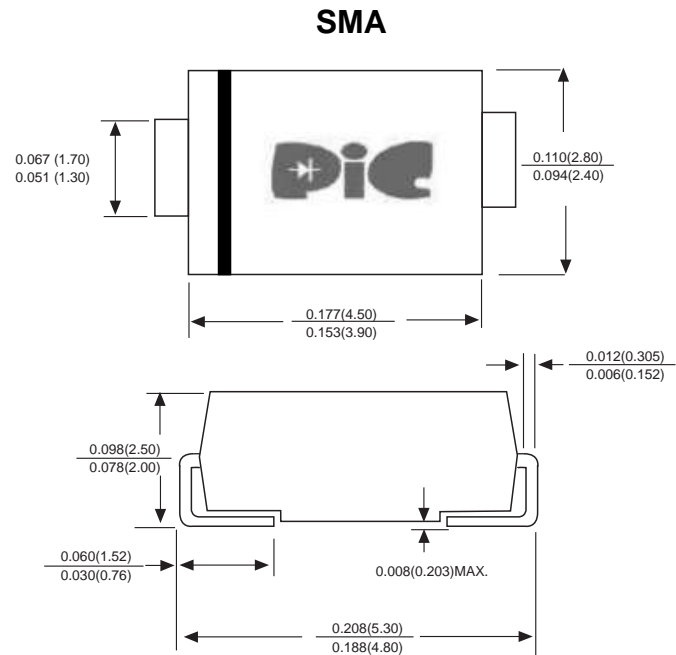
### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 250°C/10 seconds at terminals

### Mechanical Data

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any
- Weight : 0.0023 ounce, 0.07 grams

### Package Outline Dimensions



Dimensions in inches and millimeters

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

Parameter	SYMBOLS	SK12	SK14	SK145	SK16	SK18	SK110	SK115	SK120	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	40	45	60	80	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	14	28	31.5	42	56	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	20	40	45	60	80	100	150	200	V
Maximum average forward rectifie current at TL =100°C	$I_{(AV)}$	1.0								A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30.0								A
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.55		0.70		0.85		0.9		v
Maximum DC reverse current T A =25°C at rated DC blocking voltage T A=125°C	$I_R$	0.5 50				0.05 10				m A
Typical thermal resistance	$R_{qJA}$	80.0								°C/W
Operating junction temperature range	$T_J$	-55 to +125				-55 to +150				°C
Storage temperature range	$T_{STG}$	-55 to +150								°C

### Rating and Characteristics Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

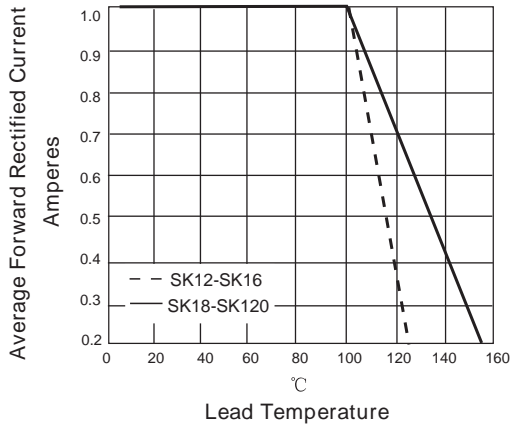


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

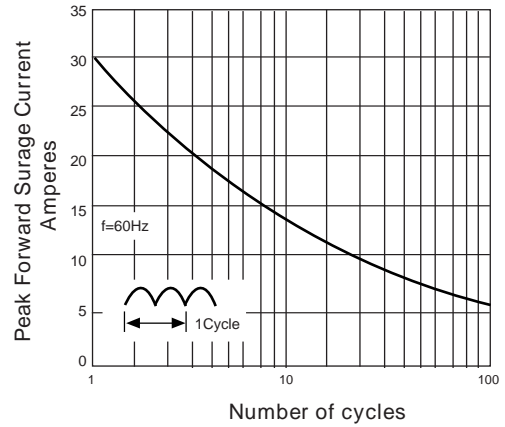


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

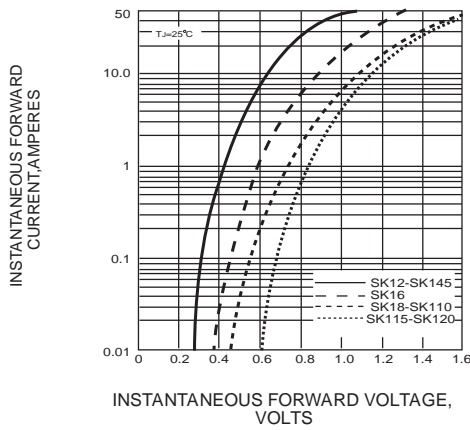
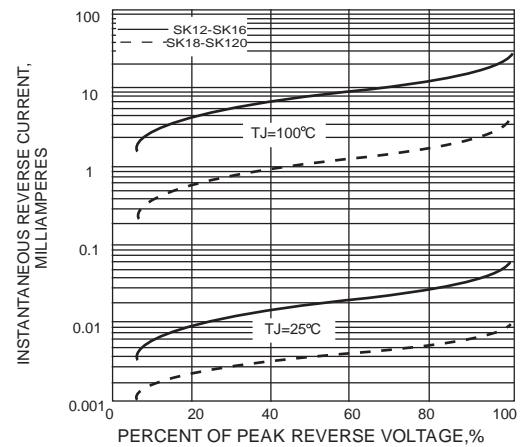
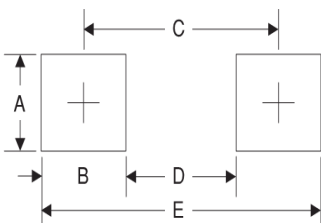


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



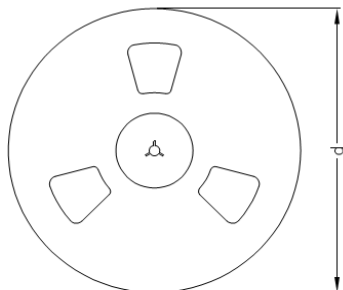
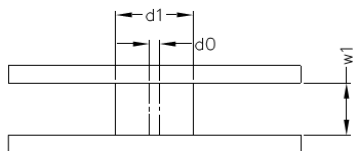
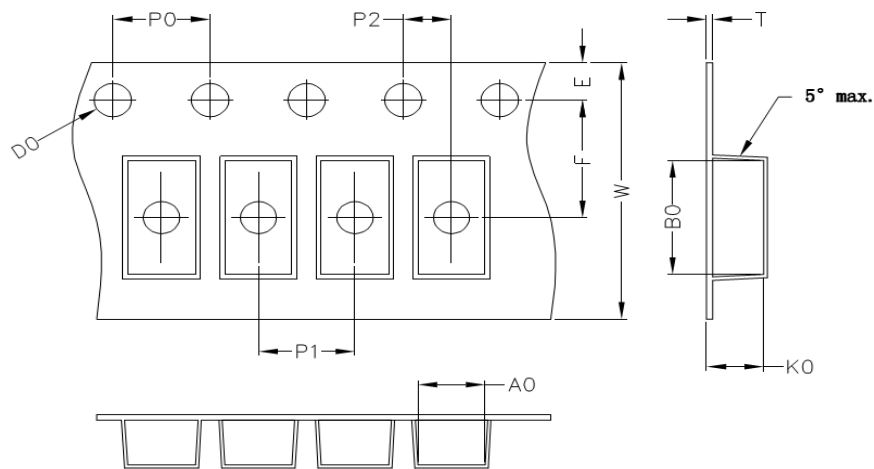
### Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.90	0.154
D	2.41	0.095
E	5.45	0.215

### Packaging Specifications

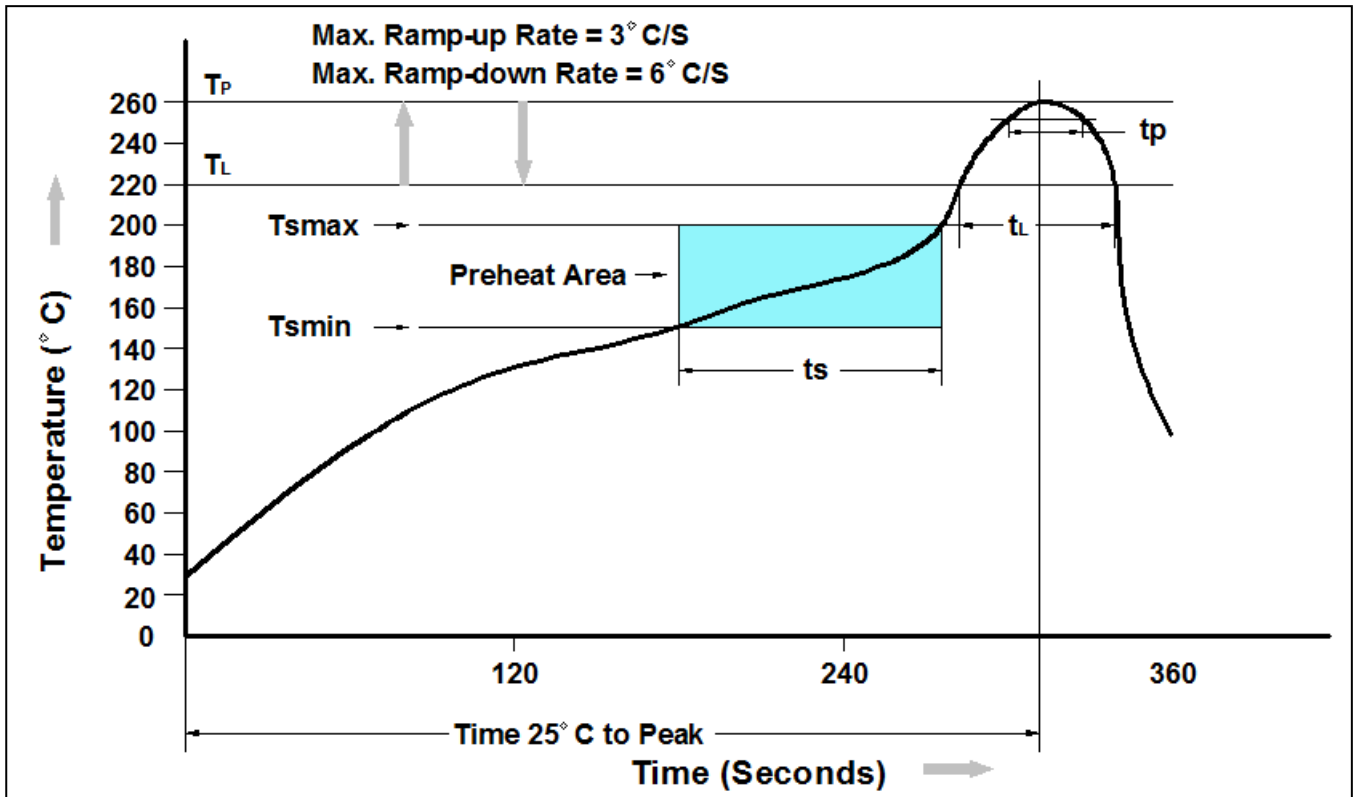
Package	A0 (mm)	B0 (mm)	K0 (mm)	D0 (mm)	E (mm)	F (mm)	P0 (mm)	P1 (mm)	P2 (mm)	T (mm)	W (mm)
SMA	2.8±0.1	5.33±0.1	2.36±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	4.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMB	3.8±0.1	5.40±0.1	2.45±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	8.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMC	6.05±0.1	8.31±0.1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

Recommend IR Reflow Soldering Thermal Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T Amin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (T Amin to Tsmax)	60-120 seconds
Average Ramp-up Rate (tL to tP)	3°C/second max.
Liquidous Temperature (TL)	217°C
Time (tL) Maintained Above (TL)	60 – 150 seconds
Peak Temperature	260°C +0°C / -5°C
Time (tP) within 5°C of actual Peak Temperature	30 seconds
Ramp-down Rate (TP to TL)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.

Ordering Information

Part Number	Description	Quantity
SK12 THRU SK120	SMA Reel	5000 pcs

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