

Characteristics

I_F	5	A
V_{RRM}	20~100	V
I_{FSM}	125	A
V_F	0.50~0.85	V

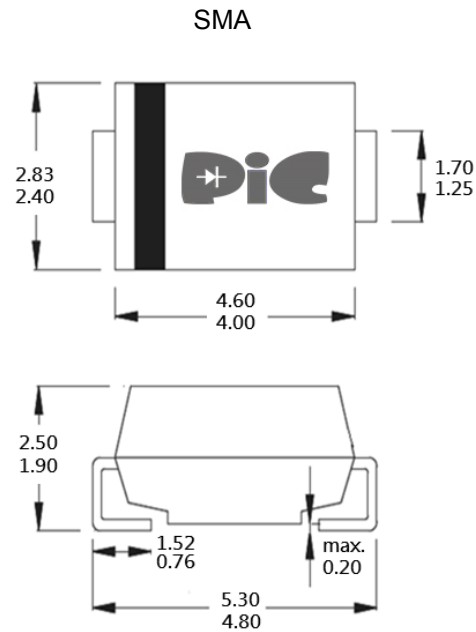
Features

- Low Forward Voltage
- Epitaxial Construction with Oxide Passivation
- Surge Overload Rating to 125A Peak
- Low Power Loss
- Fast Switching
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Terminals: Solder Plated, Solderable Per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.064 grams (approx.)

Package Outline Dimensions



Dimensions in inches and millimeters

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

Parameter	Symbol	SK52	SK53	SK54	SK55	SK56	SK58	SK59	SK510	UNITS	
Peak Repetitive Reverse Voltage	V_{RRM}									Volts	
Working Peak Reverse Voltage	V_{RWM}	20	30	40	50	60	80	90	100	Volts	
DC Blocking Voltage	V_R									Volts	
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	56	63	70	Volts	
Maximum average forward rectified current	I_F	5.0								Amps	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDC Method)	I_{FSM}	125								Amps	
Forward Voltage $I_F = 5.0A$	V_F	0.50			0.75		0.85			Volts	
Peak Reverse Current $T_J = 25^\circ C$ At Rated DC Blocking Voltage $T_J = 100^\circ C$	I_R	0.5					20				mA
Typ. Junction Capacitance (Note 2)	C_J	500				380				pF	
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	70									$^\circ C/W$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	18									$^\circ C/W$
Operating Temperature Range	T_J	-55 to +125				-55 to +150				$^\circ C$	
Storage Temperature Range	T_{STG}	-55 to +150									$^\circ C$

Notes:

- (1) Mounted on FR-4 PCB with 8.0 X 8.0mm copper pads.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Rating and Characteristics Curves

Fig. 1 Forward Current Derating Curve

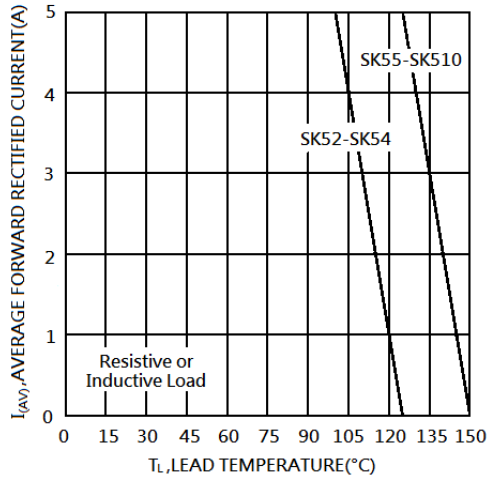


Fig. 2 Typ. Forward Characteristics

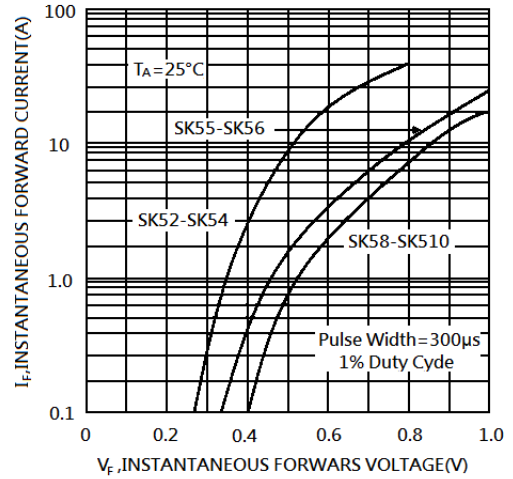


Fig. 3 Forward Surge Current Derating Curve

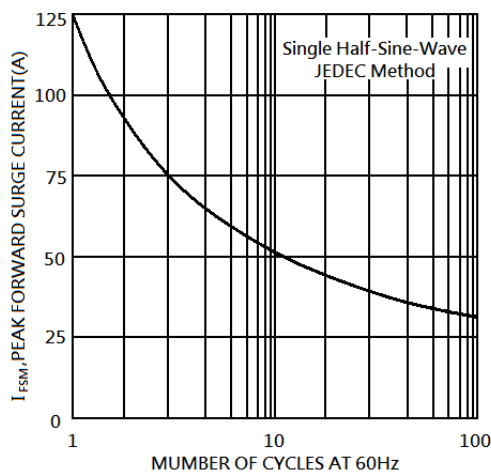


Fig. 4 Typical Reverse Characteristics

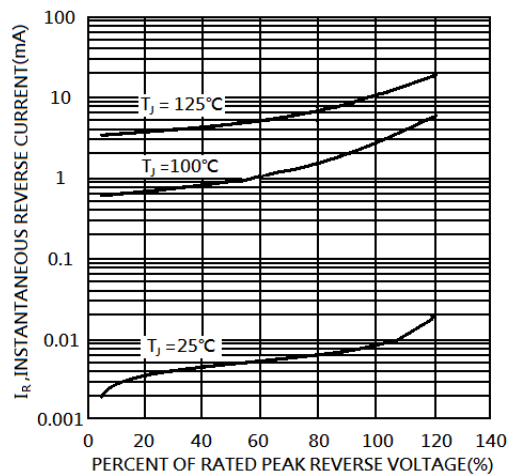
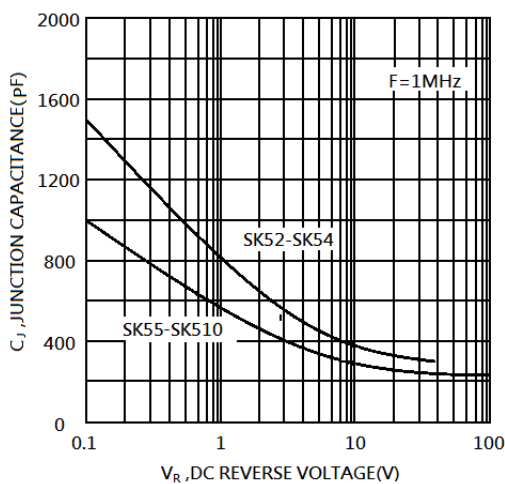
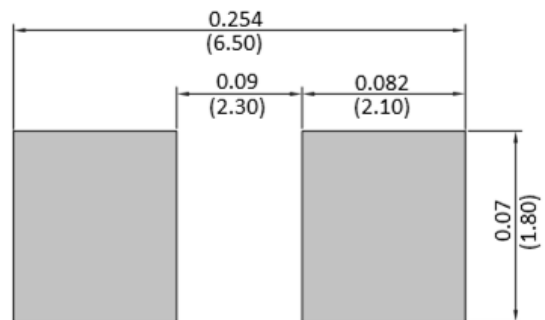


Fig. 5 Typ. Junction Capacitance



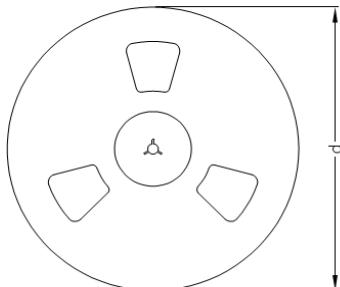
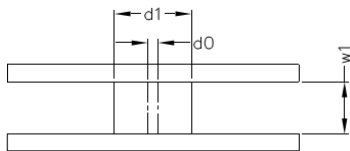
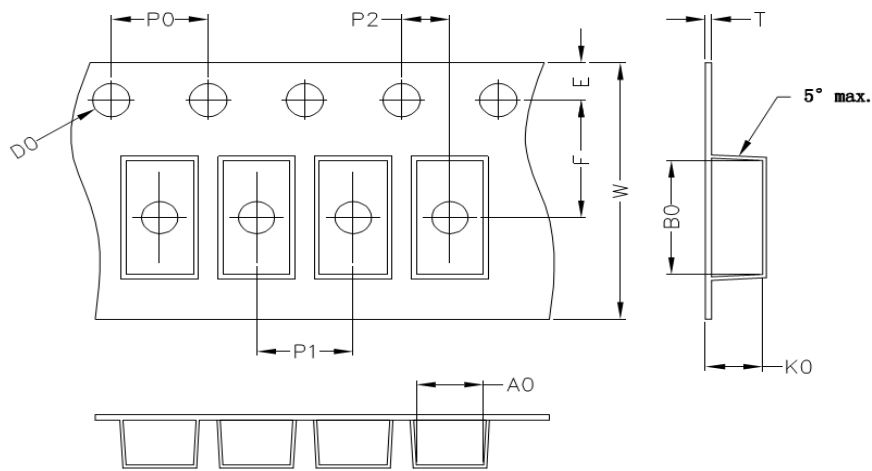
Suggested Pad Layout



Unit: inch (mm)

Packaging Specifications

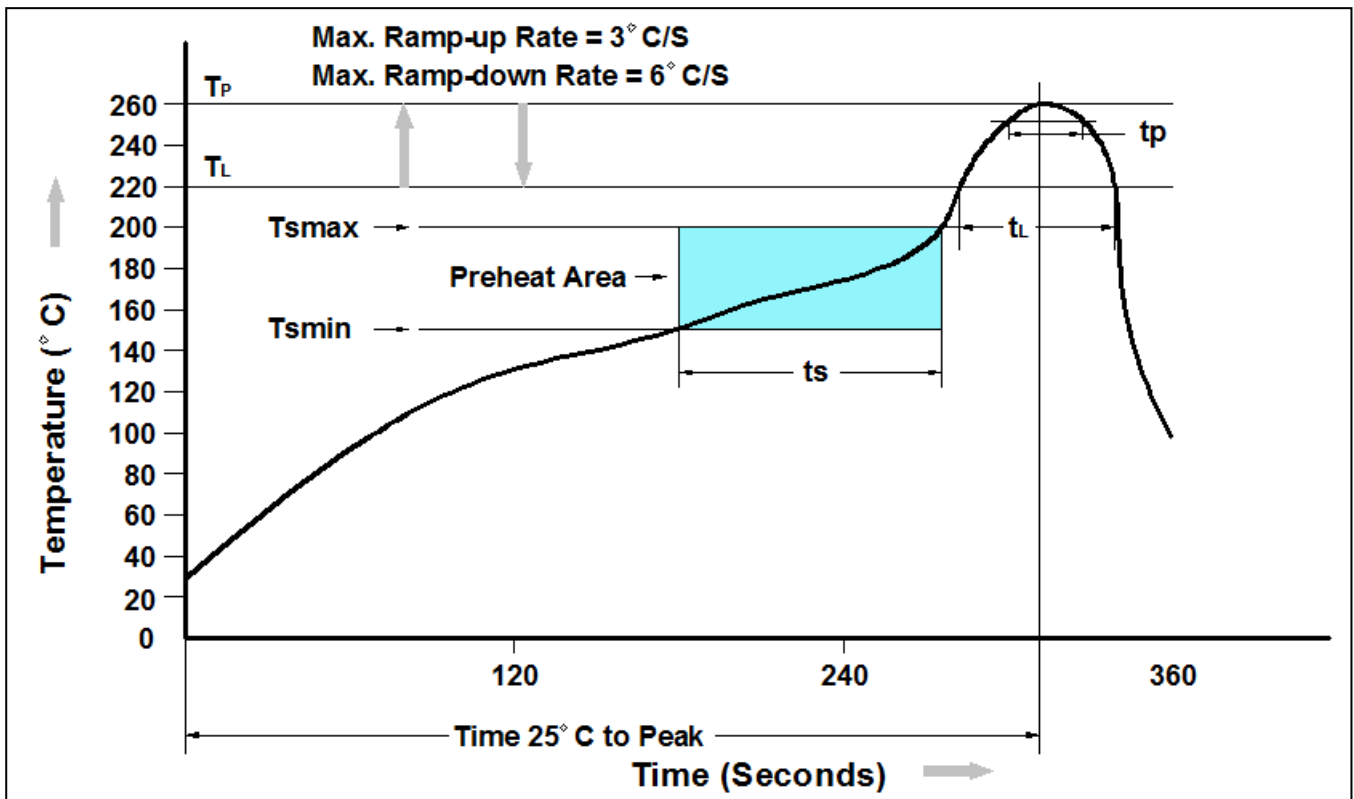
Package	A0 (mm)	B0 (mm)	K0 (mm)	D0 (mm)	E (mm)	F (mm)	P0 (mm)	P1 (mm)	P2 (mm)	T (mm)	W (mm)
SMA	2.8±0.1	5.33±0.1	2.36±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	4.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMB	3.8±0.1	5.40±0.1	2.45±0.1	1.55±0.1	1.75±0.1	5.50±0.1	4.0±0.1	8.0±0.01	2±0.1	0.25±0.1	9.4±0.1
SMC	6.05±0.1	8.31±0.1	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 _{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
SK52~SK510	SMA Reel	5000 pcs

DISCLAIMER

- The information in this document and any product described herein are subject to change without notice and should not be construed as a commitment by Paceleader, Paceleader reserve the right to make changes to the information in this document.
- Though Paceleader make effort to improve product quality and reliability, Product can malfunction and fail due to their inherent electrical sensitivity and vulnerability to physical stress, it is the responsibility of the customer, when utilizing Paceleader products, to comply with the standards of safety in making a safe design for entire system and to avoid situation in which a malfunction or failure., In developing a new designs, customer should ensure that the device which shown in this documents are used within specified operatingranges.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by Paceleader for any infringements of patents or other rights of the third parties which may result from its use.