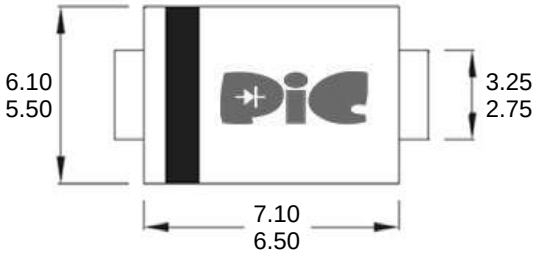
SK1040C THRU SK10200C

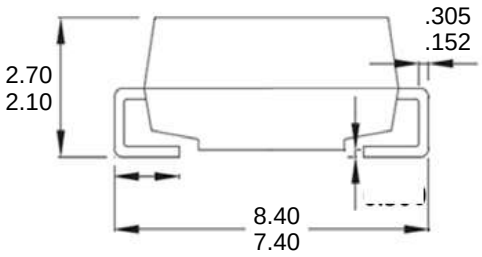
Surface Mounted Schottky Barrier Rectifiers

Features

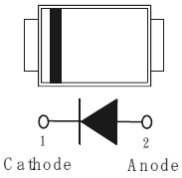
- Low reverse leakage
- High forward surge capability
- High reliability
- High temperature soldering guaranteed: 260℃/10seconds
- Lead and body according with RoHS standard
- Moisture Sensitivity Level 1
- Unit Weight: 0.21 grams (approximate)

SMC





Unit: millimeters



Mechanical Data

- Case:DO-214AB Molded plastic
- Lead: Pure tin plated, lead free
- Epoxy: UL 94V-0 rate flame retardant
- Marking: Same as Part Number.

Maximum Ratings & Electrical Characteristic

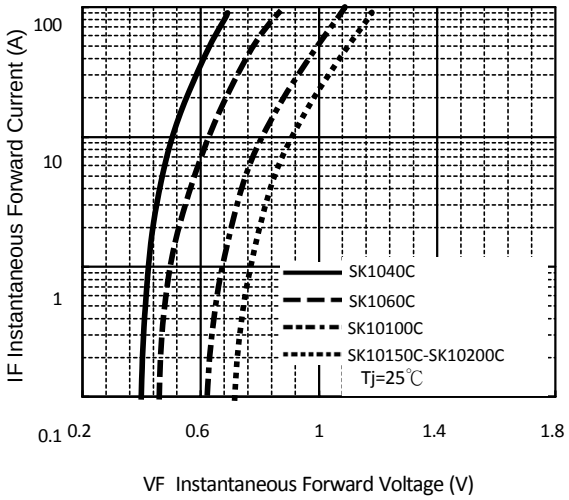
Parameter	Symbols	SK1040C	SK1060C	SK10100C	SK10150C	SK10200C	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	42	70	105	140	V
Maximum DC blocking voltage	V_{DC}	40	60	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	10.0					A
Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave	I_{FSM}	250					A
Maximum forward voltage@IF=10.0A	V_F	0.55	0.70	0.85	0.95		V
Maximum reverse current@VDC TA= 25℃	I_R	500		100			μA
TA= 100℃		20		10			mA
Typical thermal resistance (Note 1)	$R_{\theta JA}$	65					℃/W
	$R_{\theta JL}$	15					
Type junction capacitance VR=4.0V,f=1MHz	C_J	400					pF
Operating junction	T_J	-55 --- +125		-55 --- +150			℃
Storage temperature rang	T_{STG}	-55 --- +150					℃

Note:
1) Thermal resistance from junction to ambient , PCB mounted.

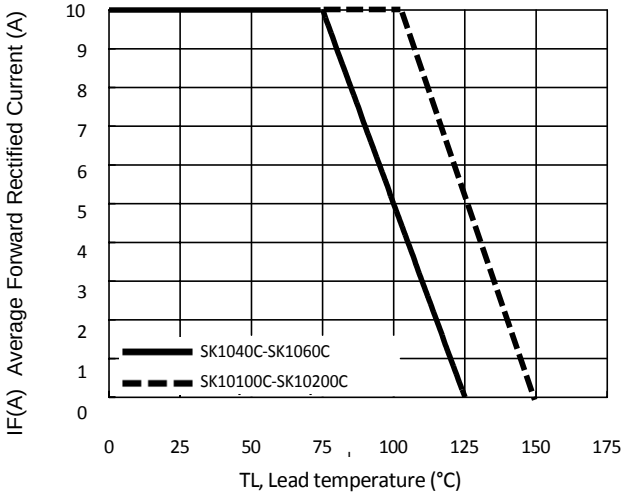
Spec No:37315H21
Date:2023.Jun
Revision:D

Characteristic Curves

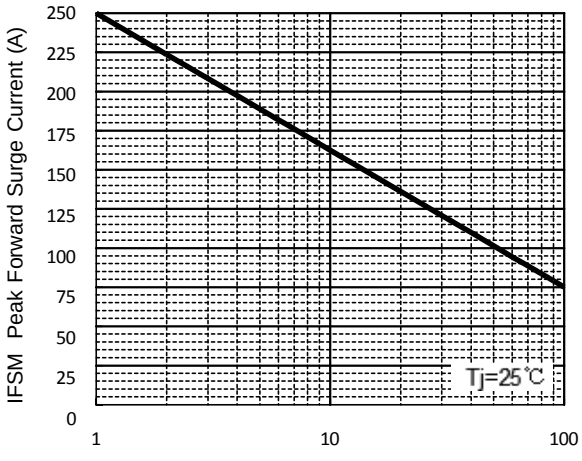
TYPICAL FORWARD CHARACTERISTIC



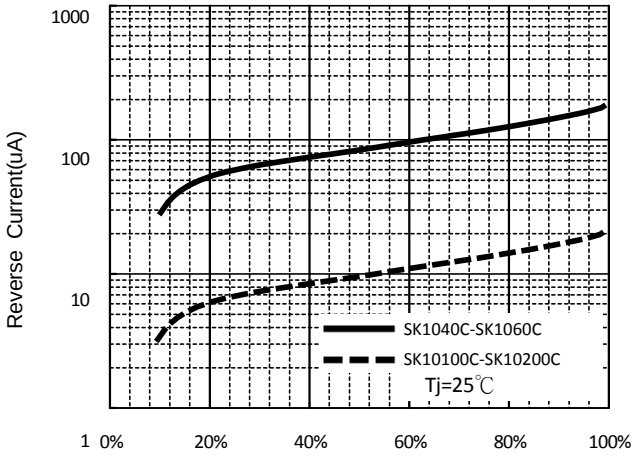
FORWARD CURRENT DERATING CURVE



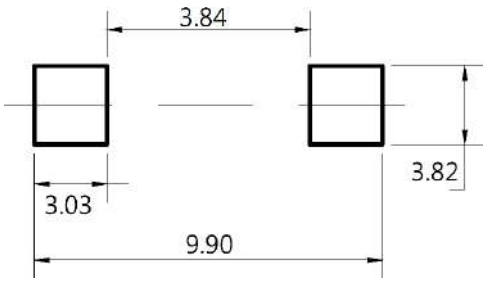
MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT



Typical Reverse Characteristics



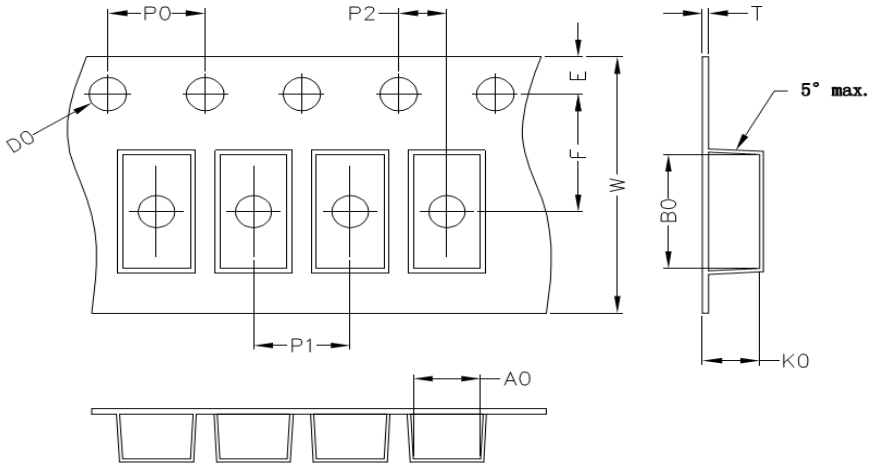
Suggested Pad Layout

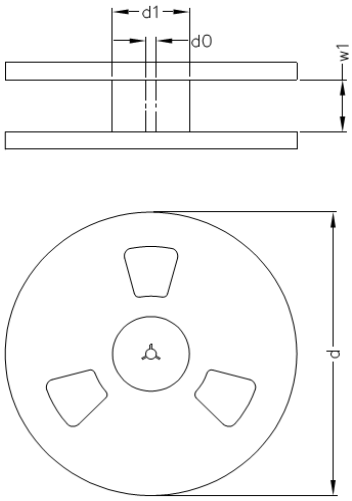


Unit: millimeters

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





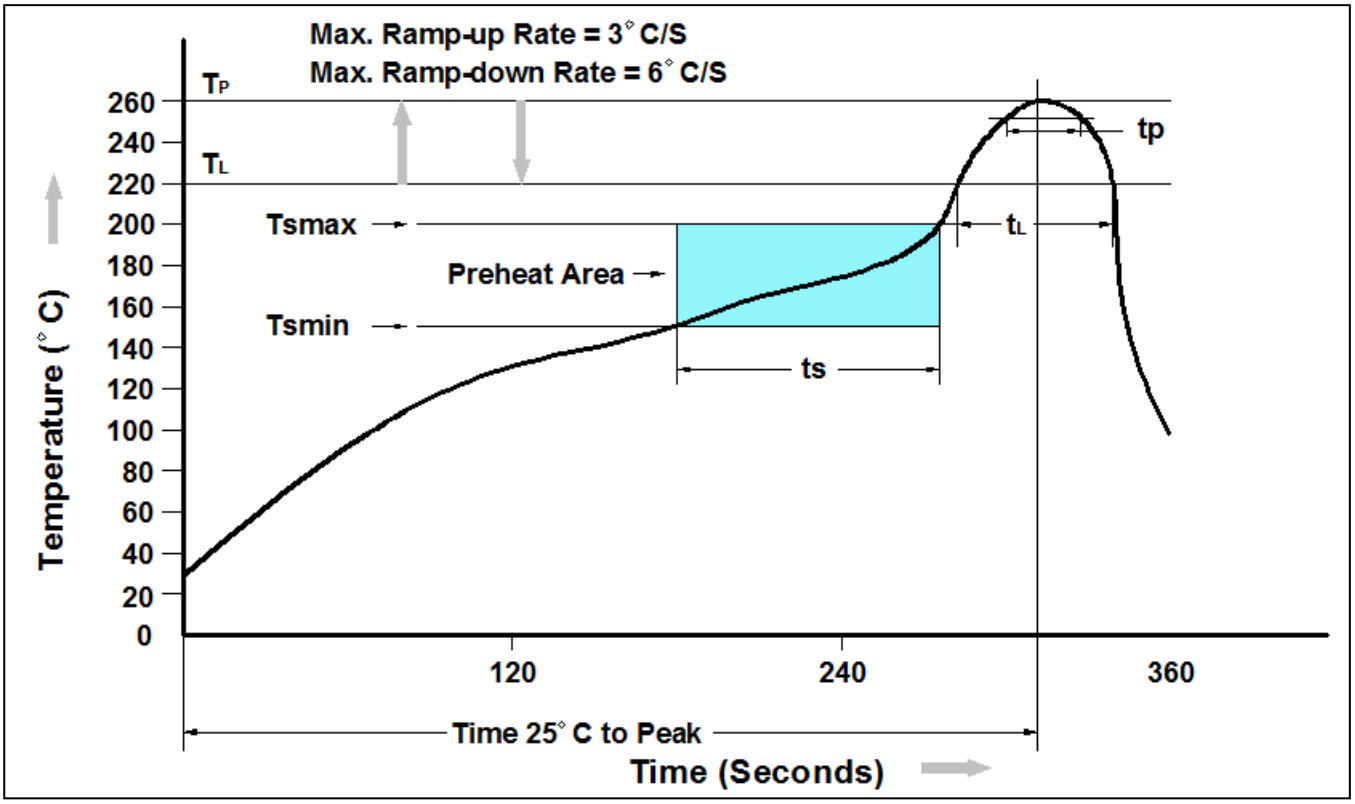
Package	D1 (mm)	D0 (mm)	W1 (mm)	D (mm)
SMA	75	13.5	13.5	330
SMB	75	13.5	13.5	330
SMC	75	13.5	17.0	330

NOTE：The tolerance of reel is ±2mm

Ordering Information

Part Number	Description	Quantity
SK1040C~SK10200C	SMC / Ree l	3000 pcs

Recommand IR Reflow Soldering Thermal Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (Tsmin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (Tsmin 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.

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