



2.0Amp. Surface Mount Schottky Barrier Diodes

SK2XSB

Features

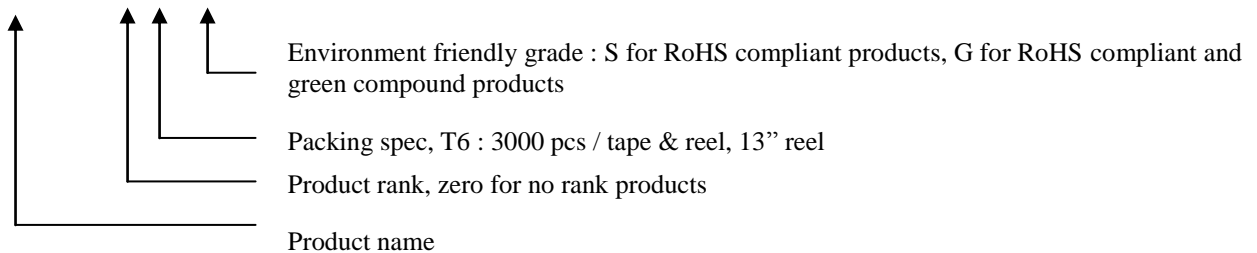
- For surface mounted applications.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Low leakage current
- High surge capability
- High temperature soldering: 250°C/10 seconds at terminals
- Exceeds environmental standards of MIL-S-19500/228

Mechanical Data

- Case: Molded plastic, JEDEC DO-214AA/SMB
- Terminals: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight: 0.093 gram

Ordering Information

Device	Package	Shipping
SK2XSB - 0-T6-G	SMB (Pb-free lead plating and halogen-free package)	3000 pcs / Tape & Reel



Maximum Ratings and Electrical Characteristics

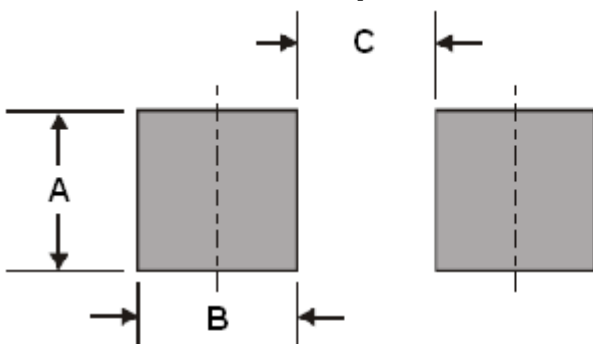
(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Type					Units
		SK22SB	SK24SB	SK26SB	SK28SB	SK2BSB	
Repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	V
Maximum DC blocking voltage	V_R	20	40	60	80	100	V
Maximum instantaneous forward voltage @ $I_F=2A$ (Note 1)	V_F	0.5		0.7	0.85		V
Maximum average forward rectified current	I_O	2					A
Peak forward surge current@ 8.3ms single half sine wave superimposed on rated load(JEDEC method)	I_{FSM}	50					A
Maximum DC reverse current@ $V_R=V_{RRM}, T_A=25^\circ C$ (Note 1) $V_R=V_{RRM}, T_A=125^\circ C$ (Note 1)	I_R	0.5 10					mA
Maximum thermal resistance, Junction to ambient(Note 2)	$R_{th,JA}$	40 (typ)					°C/W
Diode junction capacitance@ f=1MHz and applied 4V reverse voltage	C_J	180 (typ)					pF
Storage temperature	T_{stg}	-65~+150					°C
Operating temperature	T_J	-65~+150					°C

Notes : 1.Pulse test, pulse width=300 μ sec, 2% duty cycle

2.Mounted on PCB with 0.2"×0.2"mm² (0.5mm×0.5mm) copper pad area.

Recommended Footprint

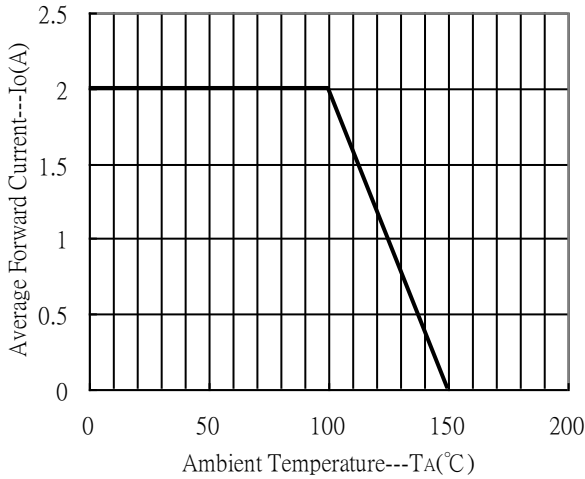


Dimensions in inches and (millimeter)

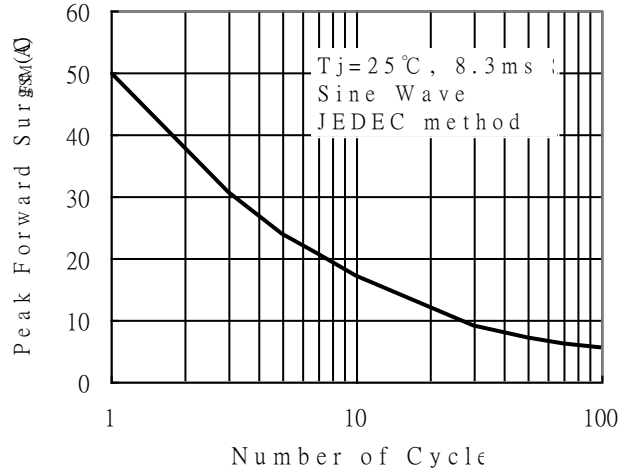
DIM	Inches	Millimeters
	Typ	Typ
A	0.142	3.60
B	0.059	1.50
C	0.118	3.00

Characteristic Curves

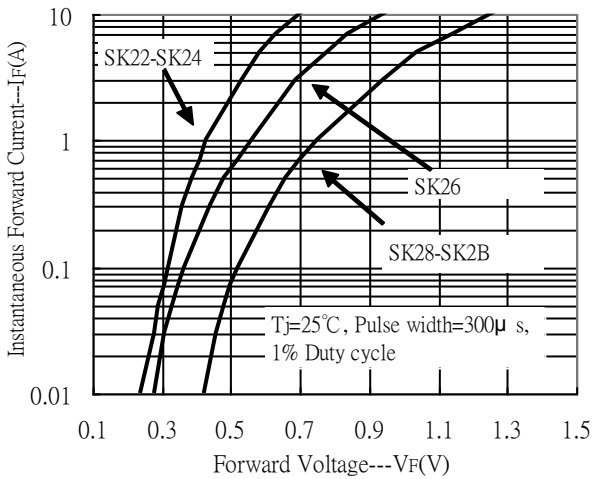
Forward Current Derating Curve



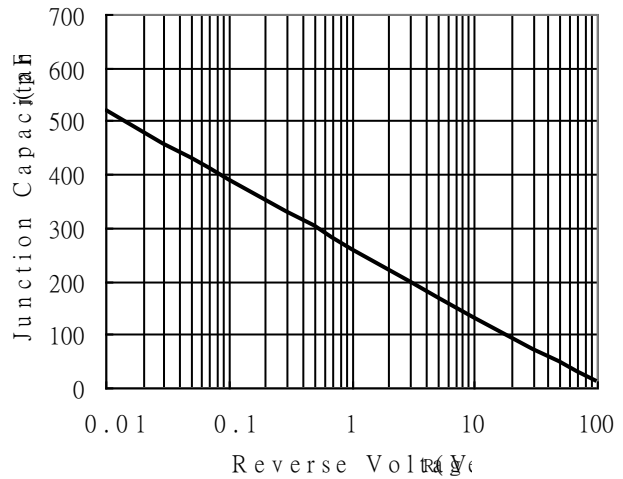
Maximum Non-Repetitive Forward



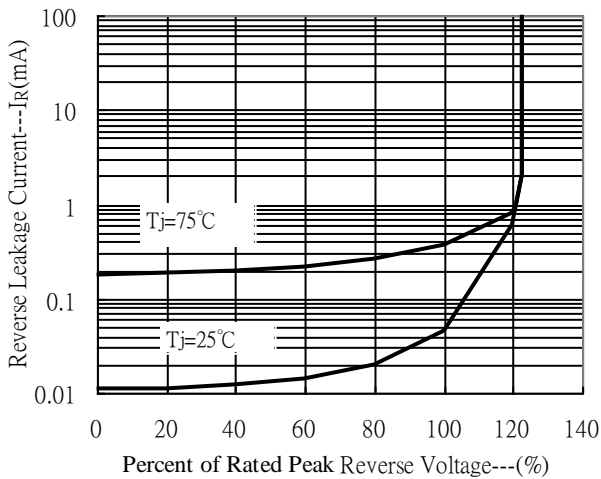
Forward Current vs Forward Voltage



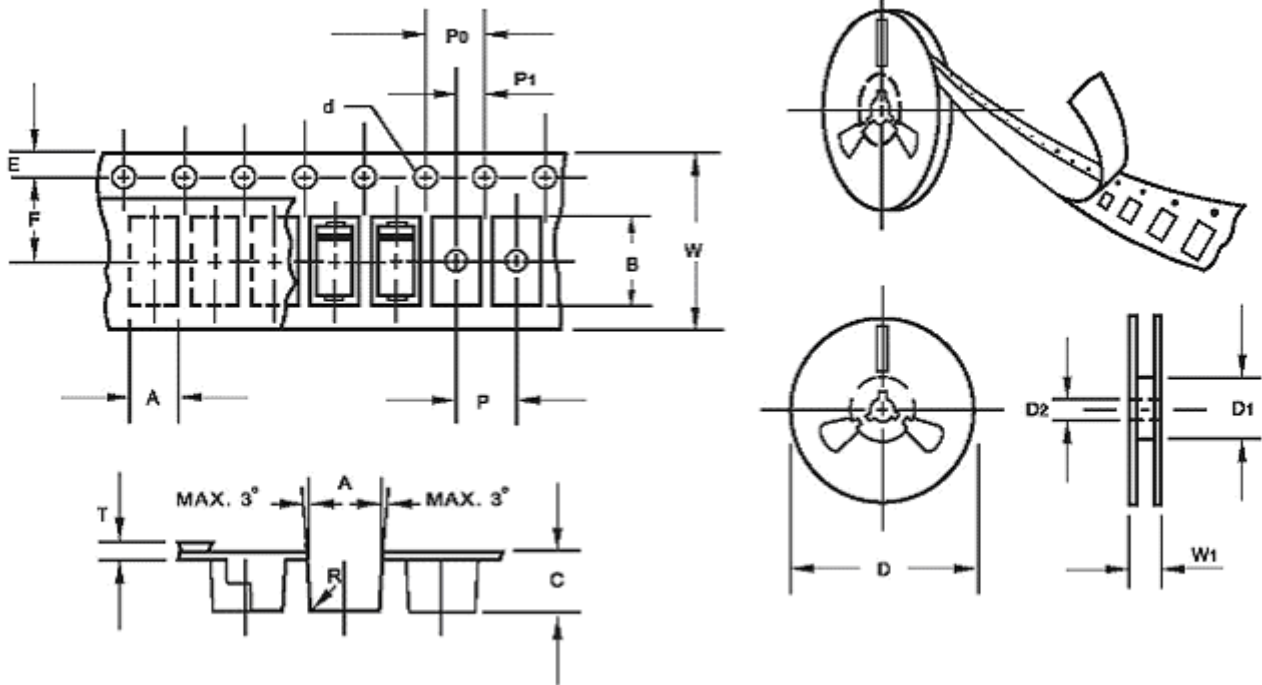
Junction Capacitance vs



Reverse Leakage Current vs Reverse Voltage



Taping Reel Dimension



unit : mm

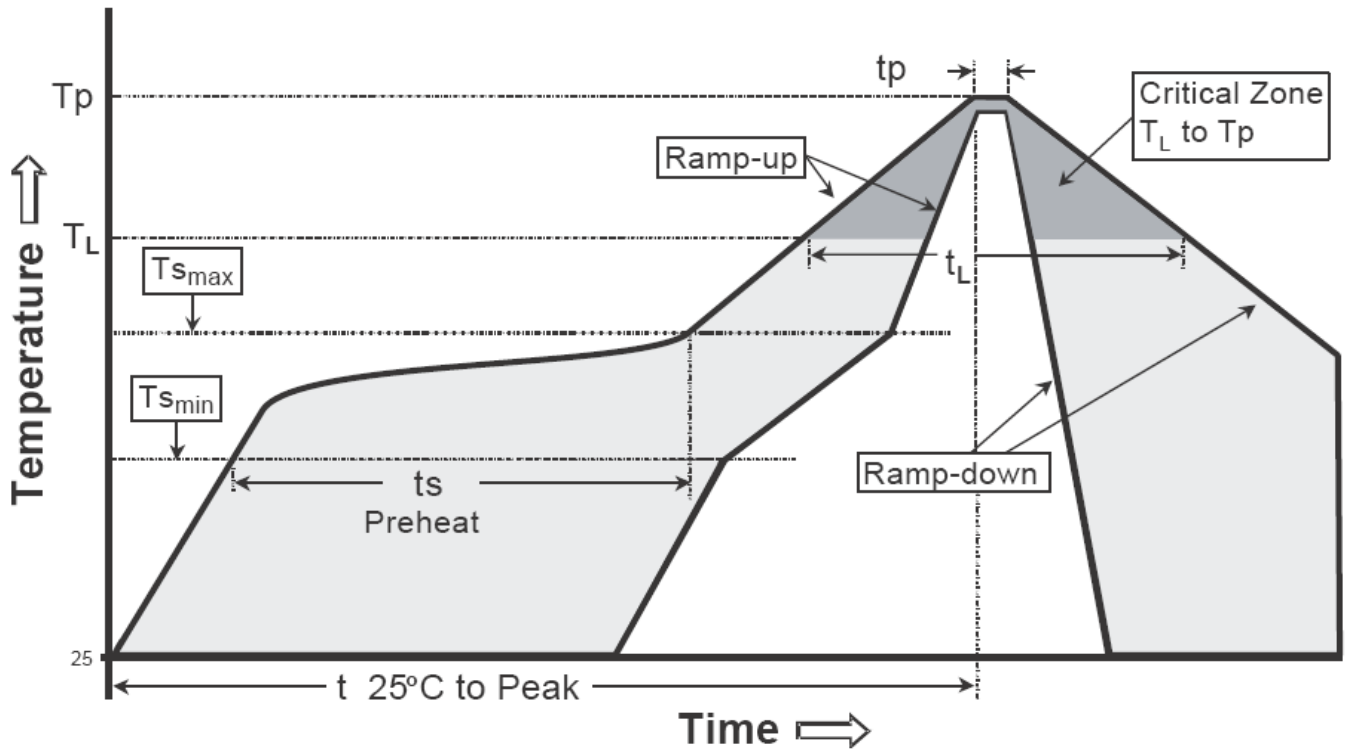
Item	Tolerance	Symbol	
Carrier width	0.10	A	SEE NOTE 2
Carrier length	0.10	B	
Carrier depth	0.10	C	
Sprocket hole	0.10	d	1.50
13" Reel outside diameter	2.00	D	330.0
13" Reel inner diameter	min.	D1	50.0
7" Reel outside diameter	2.00	D	178.0
7" Reel inner diameter	min.	D1	62.0
Feed hole diameter	0.50	D2	13.00
Sprocket hole position	0.10	E	1.75
Punch hole position	0.10	F	5.50
Punch hole pitch	0.10	P	8.00
Sprocket hole pitch	0.10	P0	4.00
Embossment center	0.10	P1	2.00
Tape width	0.30	W	12.00
Reel width	1.00	W1	16.80

NOTE: 1.Devices are packed in accordance with EIA standard RS-481-A and specification given above

2.A,B, and C are determined by the maximum dimensions of the component size.

The clearance between the component and the cavity must be within
 0.05mm (0.002") min. to 0.5mm(0.02") max. for 8mm tape and 12mm tape,
 0.15mm(0.066") min. to 0.90mm(0.035") max. for 16mm tape and
 0.15mm(0.066") min. to 1.0mm(0.59") max. for 24mm tape.

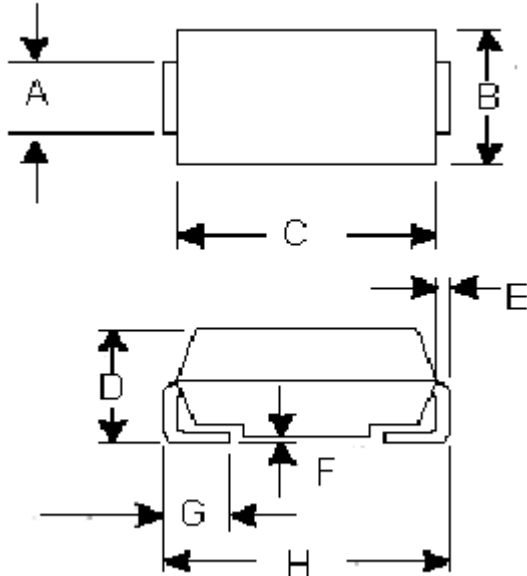
Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (T _{smax} to T _p)	3°C/second max.	3°C/second max.
Preheat		
-Temperature Min(T _{s min})	100°C	150°C
-Temperature Max(T _{s max})	150°C	200°C
-Time(t _{s min} to t _{s max})	60-120 seconds	60-180 seconds
Time maintained above:		
-Temperature (T _L)	183°C	217°C
- Time (t _L)	60-150 seconds	60-150 seconds
Peak Temperature(T _p)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

SMB/DO-214AA Dimension



Marking Code :

SK22SB	SK24SB	SK26SB
SK22	SK24	SK26

SK28SB	SK2BSB	
SK28	SK2B	

SMB/DO-214AA Plastic
 Surface Mounted Package
 CYStek Package Code : SB

*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.075	0.083	1.91	2.11	E	0.006	0.012	0.152	0.305
B	0.130	0.155	3.30	3.94	F	0.002	0.008	0.051	0.203
C	0.160	0.185	4.06	4.70	G	0.030	0.060	0.76	1.52
D	0.083	0.096	2.13	2.44	H	0.200	0.220	5.08	5.59

Notes : 1.Controlling dimension : millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material :

- Lead : Pure tin plated.
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0.

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