

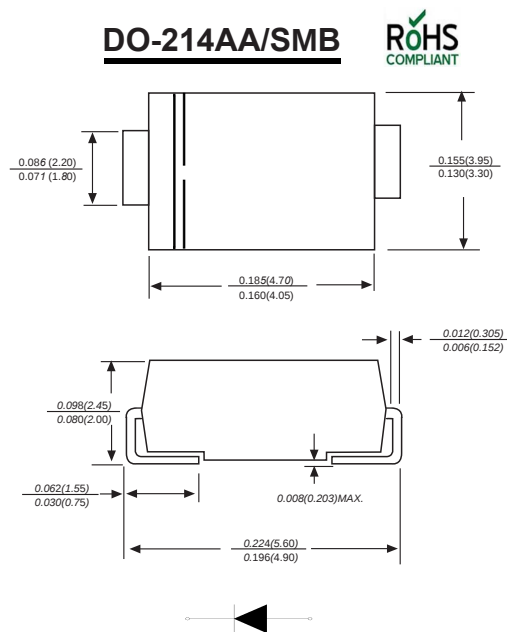
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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:
250 °C/10 seconds at terminals

Mechanical Data

Case : JEDEC DO-214AA/SMB molded plastic body
 Terminals : Solderable per MIL-STD-750, Method 2026
 Polarity : Color band denotes cathode end Mounting
 Position : Any
 Weight : 0.002 ounce, 0.07 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

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	SYMBOLS	MDD SK102B	MDD SK103B	MDD SK1035B	MDD SK104B	MDD SK1045B	MDD SK106B	MDD SK108B	MDD SK1010B	UNITS
Marking Code										
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	35	40	45	60	80	100	V
Maximum RMS voltage	V _{RMS}	14	21	24.5	28	31.5	42	56	70	V
Maximum DC blocking voltage	V _{DC}	20	30	35	40	45	60	80	100	V
Maximum average forward rectified current at TL(see fig.1)	I _{AV}	10.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150								A
Maximum instantaneous forward voltage at 10.0A	V _F	0.55					0.65	0.85		V
Maximum DC reverse current at rated DC blocking voltage T _A =25℃ T _A =100℃	I _R	1.0								mA
		20.0								
Typical junction capacitance (NOTE 1)	C _J	500								pF
Typical thermal resistance (NOTE 2)	R _{θJA}	18.0								℃/W
Operating junction temperature range	T _J	-50 to +125								℃
Storage temperature range	T _{STG}	-50 to +150								℃

Note: 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

Typical Characteristics

Figure 1
Typical Forward Characteristics

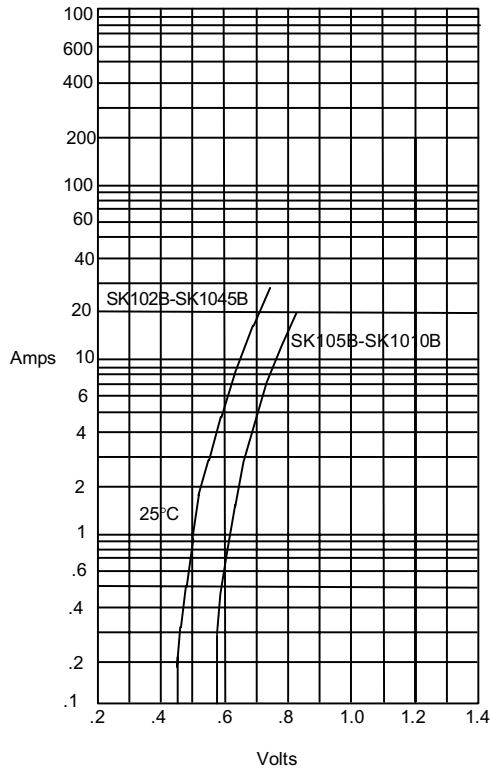


Figure 2
Forward Derating Curve

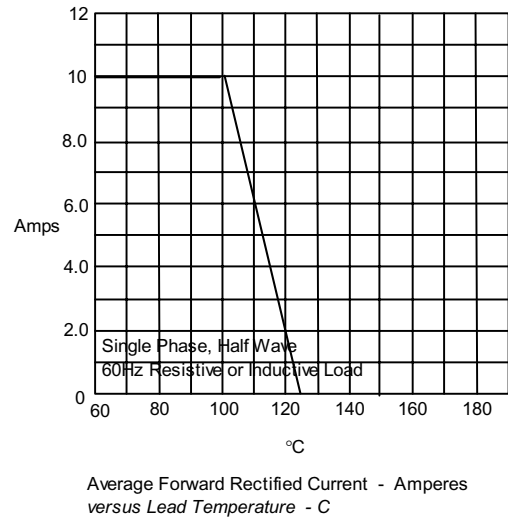
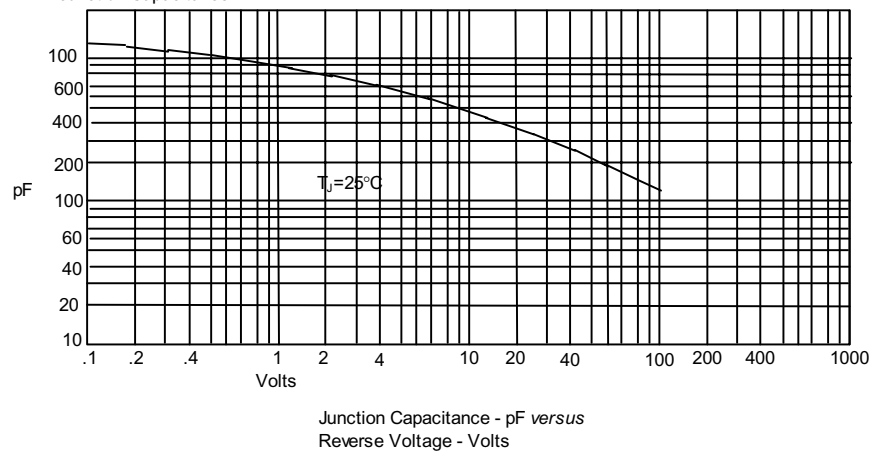


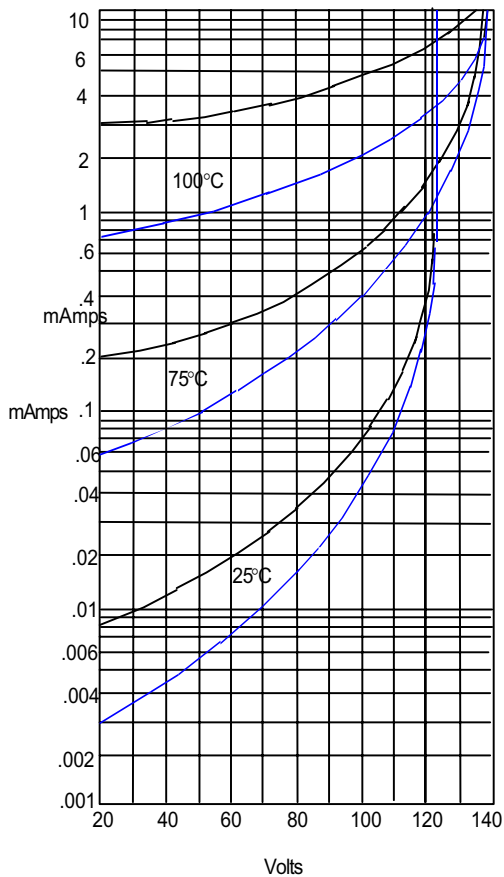
Figure 3
Junction Capacitance



The curve above is for reference only.

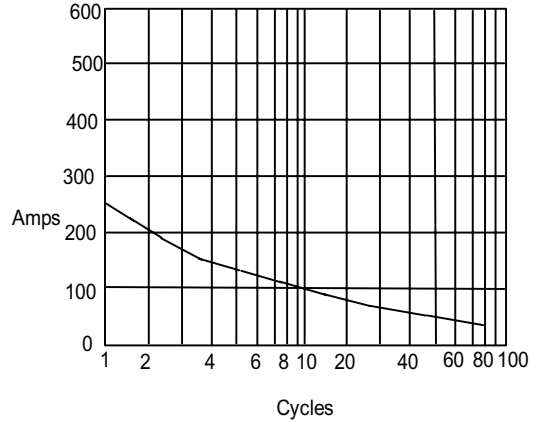
Typical Characteristics

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current

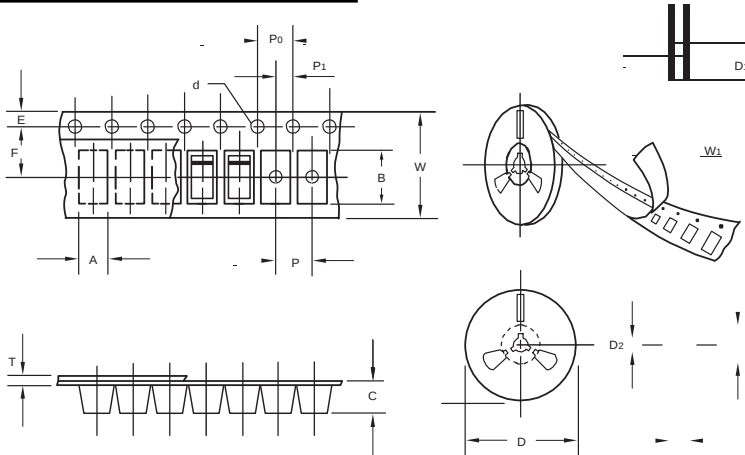


Peak Forward Surge Current - Amperes versus
Number Of Cycles At 60Hz - Cycles

SK102-SK1045 —
SK105-SK1010 —

The curve above is for reference only.

Packing information



unit:mm

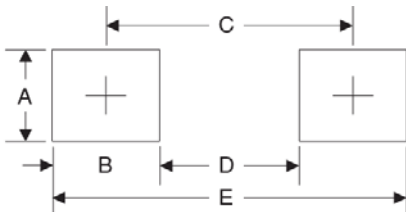
Item	Symbol	Tolerance	SMA
Carrier width	A	0.1	2.80
Carrier length	B	0.1	5.33
Carrier depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D1	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	62.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W1	1.0	18.00

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMB	13"	3,000	4.0	6,000	190*190*41	330	365*365*360	48,000	14.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.93	0.154
D	2.41	0.095
E	5.45	0.215