1.0Amp. Surface Mount Schottky Barrier Diodes

SK1XSA Series

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
- Pb-free package

Mechanical Data

- Case: SMA/DO-214AC molded plastic.
- Terminals: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Indicated by cathode band.
- Packaging: 12mm tape per EIA STD RS-481.
- Weight: 0.064 gram, 0.002 ounce

Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.)

Parameter	Symbol	Type					Units
		SK12	SK14	SK16	SK18	SK1B	
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, IF=1A	V_F	0.5		0.7	0.85		V
Maximum average forward rectified current @ T_L = 100℃	I_O	1.0					A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30					A
Maximum DC reverse current @ T_J = 25℃ At Rated DC Blocking Voltage @ T_J = 100℃	I_R	0.5 10					mA mA
Maximum thermal resistance, Junction to ambient(Note 1)	$R_{th,JA}$	88 (typ)					℃/W
Diode junction capacitance @ f = 1MHz and applied 4V reverse voltage	C_J	120 (typ)					pF
Operating Junction and Storage temperature Rang	T_J, Tstg	-55 ~ +125 / -55 ~ +150					℃

Notes : 1. Mounted on PCB with 14mm² (0.013mm thickness) copper pad area.

Characteristic Curves

FIG.1 - FORWARD CURRENT DERATING CURVE

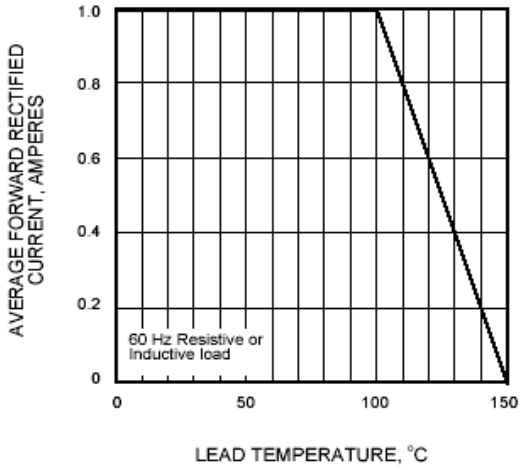


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

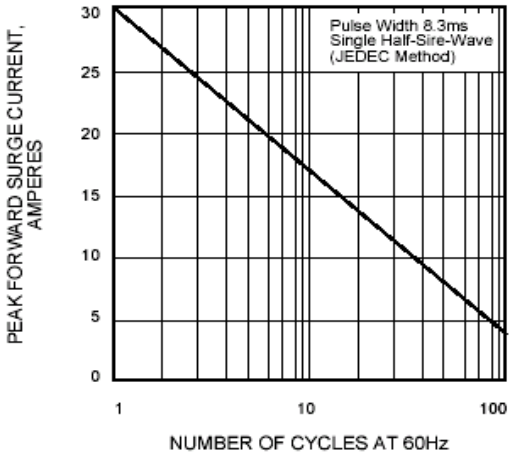


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

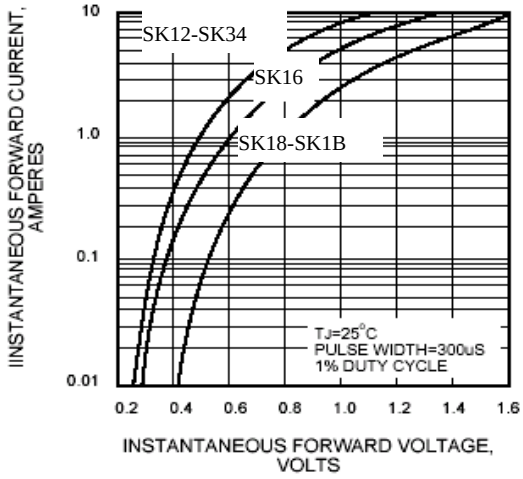


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

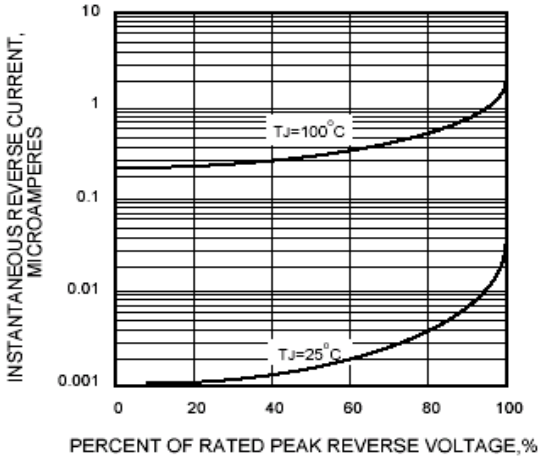
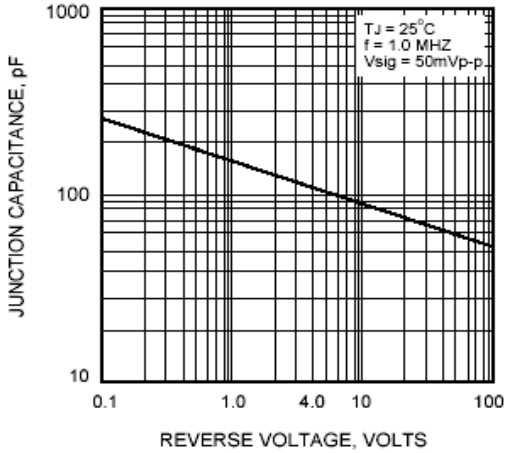
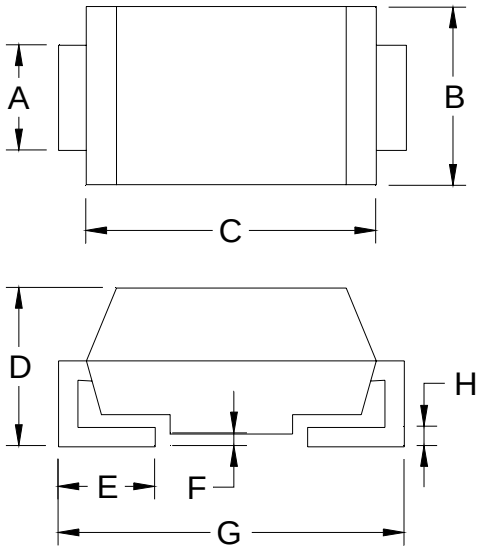


FIG.5 - TYPICAL JUNCTION CAPACITANCE



SMA Dimension



Marking :

Device	SK12	SK14	SK16	SK18
Code	SK12	SK14	SK16	SK18

Device	SK1B			
Code	SK1B			

SMA/DO-214AC Plastic
Surface Mounted Package
CYStek Package Code : SA

*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.055	0.062	1.40	1.60	E	0.030	0.060	0.76	1.52
B	0.098	0.114	2.50	2.90	F	0.002	0.008	0.051	0.203
C	0.157	0.181	4.00	4.60	G	0.188	0.208	4.80	5.28
D	0.078	0.096	2.00	2.44	H	0.006	0.012	0.152	0.305

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 : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0