



# SK12 THRU SK110

1.0 AMP. SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS



## FEATURES

- \* For surface mounted application
- \* Metal to silicon rectifier, majority carrier conduction
- \* Low forward voltage drop
- \* Easy pick and place
- \* High surge current capability
- \* Plastic material used carries Underwriters Laboratory classification 94V-0
- \* Epitaxial construction
- \* Extremely Low Thermal Resistance

## MECHANICAL DATA

- \* CASE: Molded plastic
- \* Terminals: Solder plated
- \* Polarity: Indicated by cathode band
- \* Packaging: 12mm tape per EIA STD RS-481
- \* Weight: 0.091 grams (SMA/DO-214AC\*)  
0.064 grams (SMA/DO-214AC)

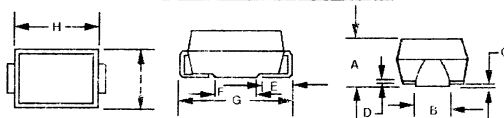
## VOLTAGE RANGE

20 to 100 Volts

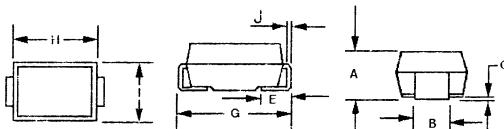
CURRENT

1.0 Ampere

### SMA/DO-214AC\*



### SMA/DO-214AC



### DIMENSIONS

	SMA/DO-214AC*		SMA/DO-214AC	
	inches	mm	inches	mm
A	.078 to .90(L)	1.98 to 2.29(L)	.078 to .090	1.98 to 2.29
A	.110 to .117(H)	2.80 to 2.98(H)		
B	.067 to .089	1.7 to 2.24	.052 to .058	1.32 to 1.47
C	.008MAX	.20MAX	.006MAX	.20MAX
D	.02MAX	.51MAX		
E	.030 to .050	.76 to 1.52	.030 to .050	.76 to 1.27
F	.067 to .094	1.66 to 2.39		
G	.204 to .220	5.21 to 5.59	.194 to .208	4.93 to 5.28
H	.160 to .179	4.06 to 4.55	.157 to .177	3.93 to 4.50
I	.101 to .112	2.56 to 2.85	.100 to .110	2.54 to 2.79
J			.006 to .012	.152 to .305

## 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%

TYPE NUMBER	SYMBOLS	SK12	SK13	SK14	SK15	SK16	SK18	SK110	UNITS		
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	V		
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	V		
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	V		
Maximum Average Forward Rectified Current $T_L = 90^\circ\text{C}$	$I_{F(AV)}$	1.0								A	
Peak Forward Surge Current, (8.3ms half sine)	$I_{FSM}$	40								A	
Maximum Instantaneous Forward Voltage @ 1.0A(NOTE 1)	$V_F$	0.45	0.55	0.60	0.72		0.80		V		
Maximum D. C Reverse Current @ $T_A = 25^\circ\text{C}$	$I_R$						0.5			mA	
at Rated D. C. Blocking Voltage @ $T_A = 100^\circ\text{C}$							10				
Typical Thermal Resistance (NOTE 2)	$R_{\theta JL}$						15			$^\circ\text{C/W}$	
Typical Junction Capacitance (NOTE 3)	$C_J$	SK12						230			pF
		SK13 ~ SK110						50			
Operating and Storage Temperature Range	$T_J / T_{STG}$	-65 to +125 /					-65 to +150			$^\circ\text{C}$	

- NOTE 1. Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%
2. P. C. B mounted 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.
3. Measured at 1MHz and applied  $V_R = 4.0\text{V D. C.}$

## RATINGS AND CHARACTERISTIC CURVES (SK12)

Figure 1 - TYPICAL FORWARD CHARACTERISTICS

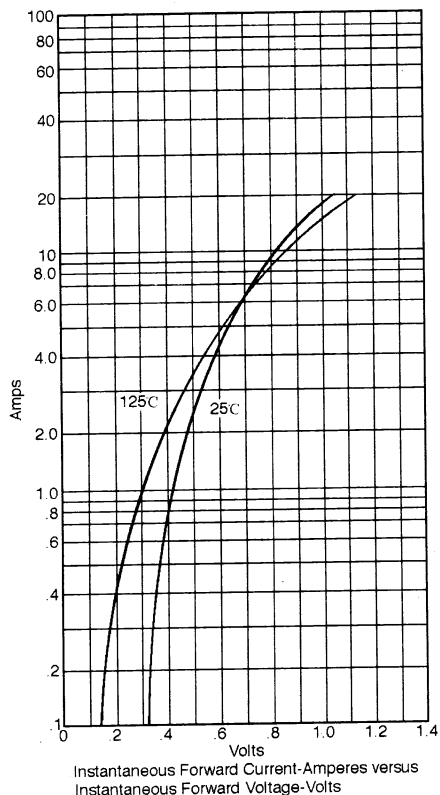


Figure 2 - TYPICAL REVERSE CHARACTERISTICS

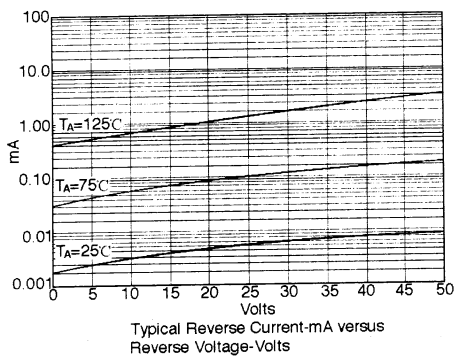
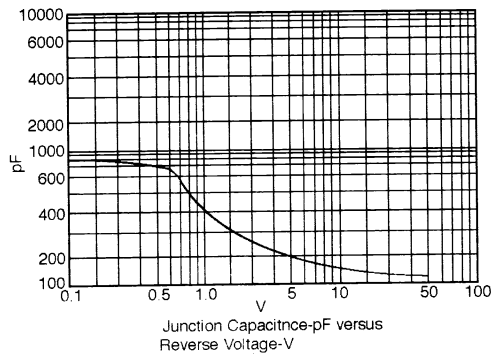
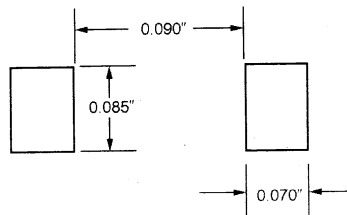


Figure 3 - TYPICAL JUNCTION CAPACITANCE



SUGGESTED SOLDER

PAD LAYOUT



## RATINGS AND CHARACTERISTIC CURVES (SK13 THRU SK16)

Figure 1  
 TYPICAL FORWARD CHARACTERISTICS

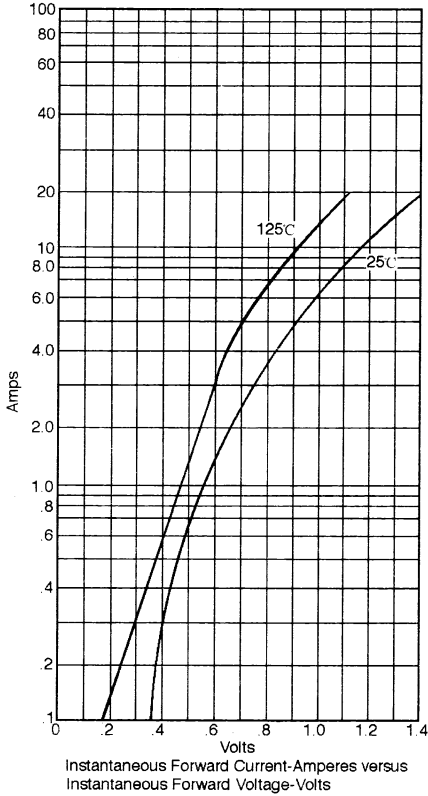


Figure 2 - TYPICAL REVERSE CHARACTERISTICS

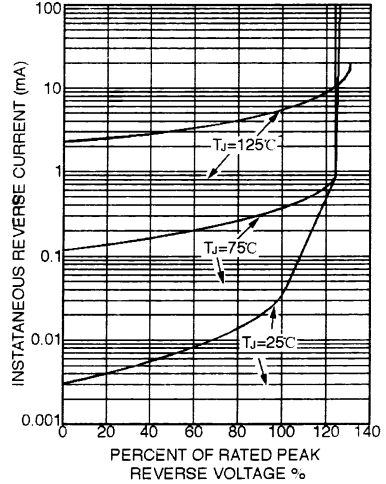
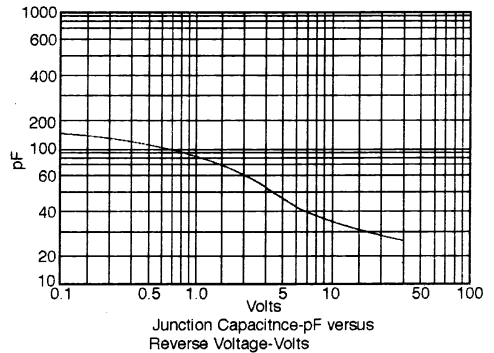
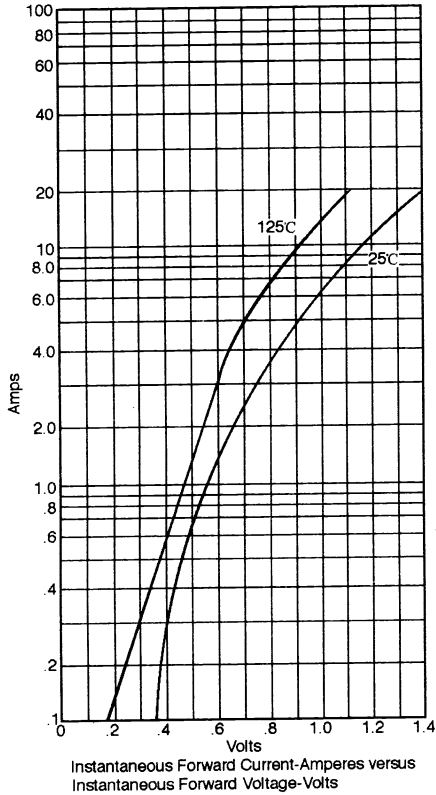


Figure 3 - TYPICAL JUNCTION CAPACITANCE

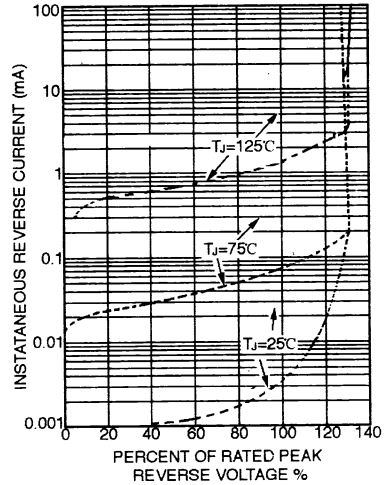


# RATINGS AND CHARACTERISTIC CURVES (SK18 THRU SK110)

**Figure 1**  
TYPICAL FORWARD CHARACTERISTICS



**Figure 2 - TYPICAL REVERSE CHARACTERISTICS**



**Figure 3 - TYPICAL JUNCTION CAPACITANCE**

