



# Frontier Electronics Corp.

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## 1A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

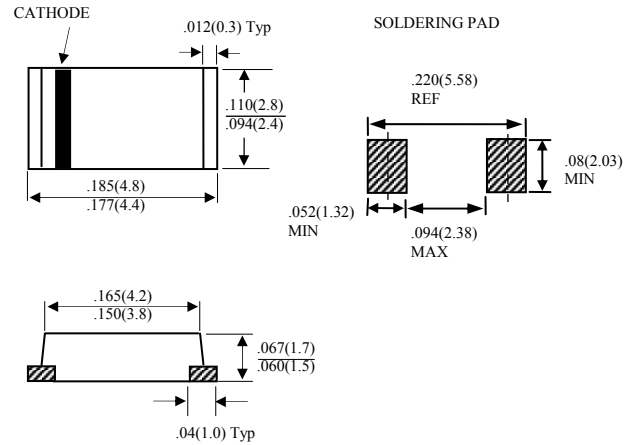
### SK12 THRU SK110

#### FEATURES

- FOR SURFACE MOUNTED APPLICATIONS
- LOW PROFILE PACKAGE
- BUILT-IN STRAIN RELIEF
- EASY PICK AND PLACE
- PLASTIC MATERIAL USED CARRIES UNDERWRITERS LABORATORY CLASSIFICATION 94 V-0
- EXTREMELY LOW VF
- MAJORITY CARRIER CONDUCTION
- HIGH TEMPERATURE SOLDERING: 250°C /10 SECONDS AT TERMINALS

#### MECHANICAL DATA

- CASE: THIN SMA, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDER PLATED
- POLARITY: INDICATED BY CATHODE BAND
- WEIGHT: 0.05 GRAMS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

RATINGS	SYMBOL	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 SEE FIG.1 (NOTE 1)	$I_O$	1.0							A
MAXIMUM OVERLOAD SURGE 8.3ms SINGLE HALF SINE-WAVE	$I_{FSM}$	25							A
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta JL}$	35							°C/W
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta JA}$	95							°C/W
STORAGE TEMPERATURE RANGE	$T_{STG}$	-55 TO + 150							°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	-55 TO + 125							°C

#### ELECTRICAL CHARACTERISTICS (AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	SK12	SK13	SK14	SK15	SK16	SK18	SK110	UNITS
MAXIMUM FORWARD VOLTAGE AT 1.0A AND 25°C (NOTE 1)	$V_F$	0.55			0.70		0.85		V
MAXIMUM REVERSE CURRENT AT 25°C (NOTE 1)	$I_R$	0.5							mA
MAXIMUM REVERSE CURRENT AT 100°C (NOTE 1)	$I_R$	20.0							mA
MARKING		SK12	SK13	SK14	SK15	SK16	SK18	K110	mA

NOTE: 1. PULSE TEST : 300μS PULSE WIDTH , 1% DUTY CYCLE

2. P.C.B. MOUNTED 0.55"x0.55 "(14x14 mm ) 0.013mm THICK COPPER PAD AREAS

# RATINGS AND CHARACTERISTIC CURVE SK12 THRU SK110

FIG. 1 - FORWARD CURRENT DERATING CURVE

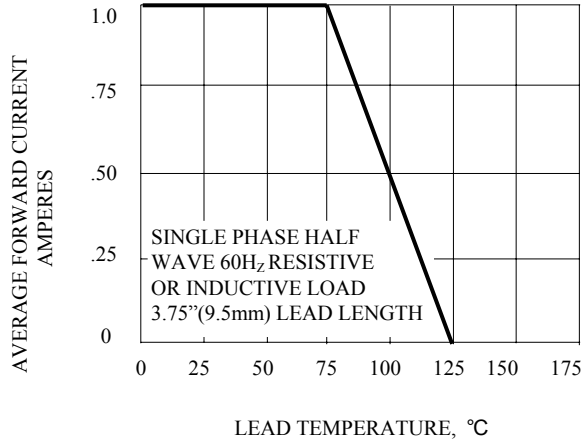


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

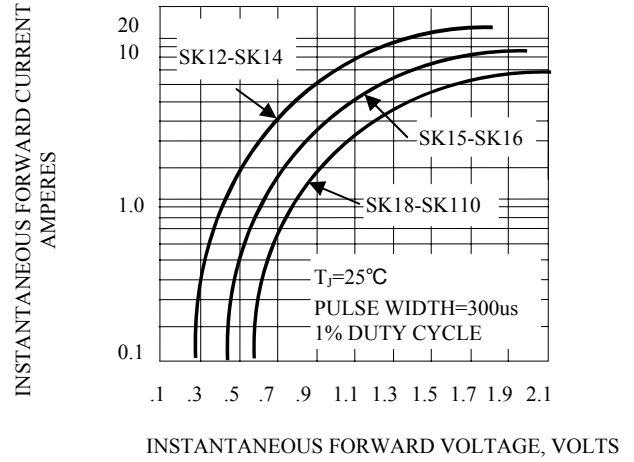


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

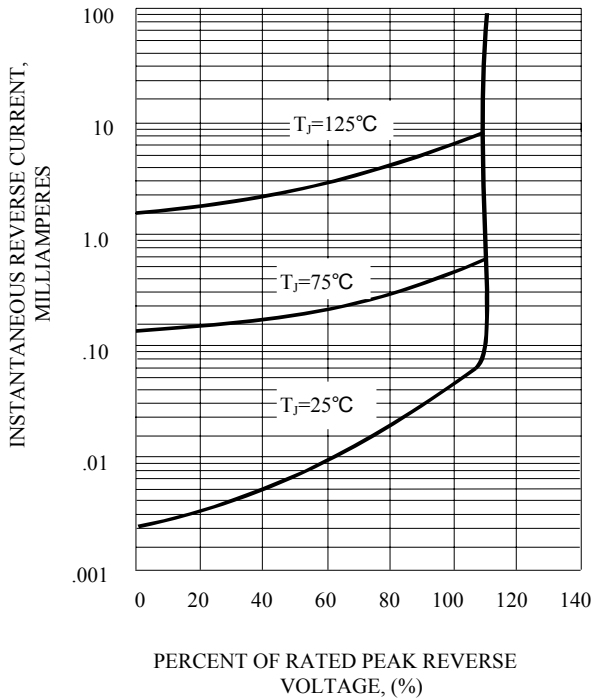


FIG. 4 - TYPICAL NON-REPETITIVE SURGE CHARACTERISTICS

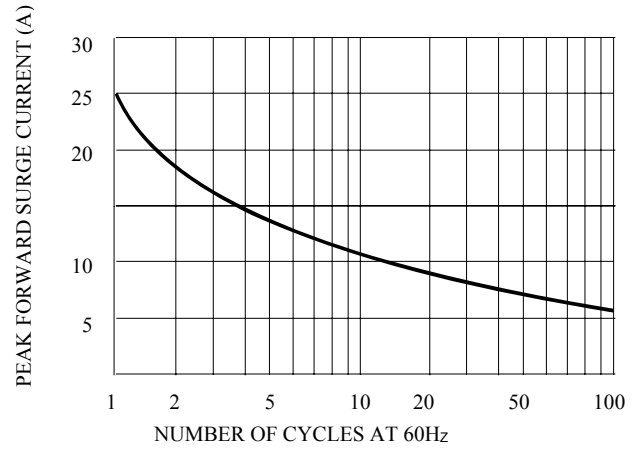


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

