



# Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: [frontiersales@frontierusa.com](mailto:frontiersales@frontierusa.com)

Web: <http://www.frontierusa.com>

## 3A SURFACE MOUNT RECTIFIER

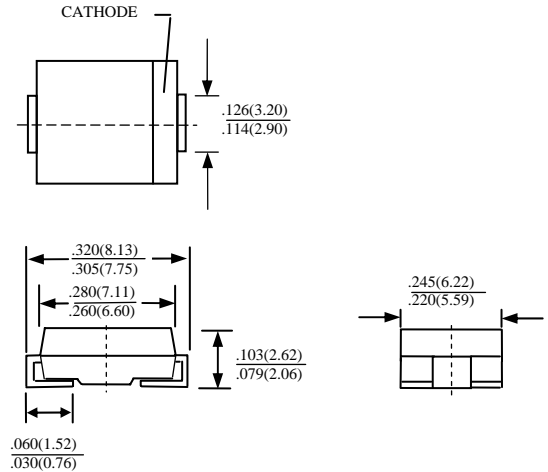
### S3A-LFR THRU S3M-LFR

#### FEATURES

- LOW PROFILE PACKAGE
- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY 94V-0
- IDEAL FOR SURFACE MOUNTED APPLICATION
- GLASS PASSIVATED CHIP JUNCTION
- BUILT-IN STRAIN RELIEF DESIGN
- HIGH TEMPERATURE SOLDERING : 250°C/10 SECONDS AT TERMINALS
- ROHS

#### MECHANICAL DATA

- CASE: JEDEC DO-214AA MOLDED PLASTIC BODY, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINAL: SOLDER PLATED, SOLDERABLE PER MIL-STD-750 METHOD 2026
- POLARITY: COLOR BAND DENOTES CATHODE
- WEIGHT: 0.21GRAMS



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	S3A-LFR	S3B-LFR	S3D-LFR	S3G-LFR	S3J-LFR	S3K-LFR	S3M-LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	$V_{RRM}$	50	100	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	$V_{RMS}$	35	70	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	$V_{DC}$	50	100	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT AT $T_J=75^\circ\text{C}$	$I_O$	3.0							A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	100							A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	$C_J$	60							PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta JL}$	13							°C/W
STORAGE TEMPERATURE RANGE	$T_{STG}$	-55 TO + 150							°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	-55 TO + 150							°C

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

CHARACTERISTICS	SYMBOL	S3A-LFR	S3B-LFR	S3D-LFR	S3G-LFR	S3J-LFR	S3K-LFR	S3M-LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_O$ DC	$V_F$	1.15							V
MAXIMUM REVERSE CURRENT AT 25°C	$I_R$	5.0							μA
MAXIMUM REVERSE CURRENT AT 125°C	$I_R$	250							μA
MARKING		S3A	S3B	S3D	S3G	S3J	S3K	S3M	

NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS

2. THERMAL RESISTANCE FROM JUNCTION TO LEAD P.C.B. MOUNTED ON 0.3×0.3”(8.0×8.0mm) COPPER PAD AREAS

# RATINGS AND CHARACTERISTIC CURVE S3A-LFR THRU S3M-LFR

FIG. 1- FORWARD CURRENT DERATING CURVE

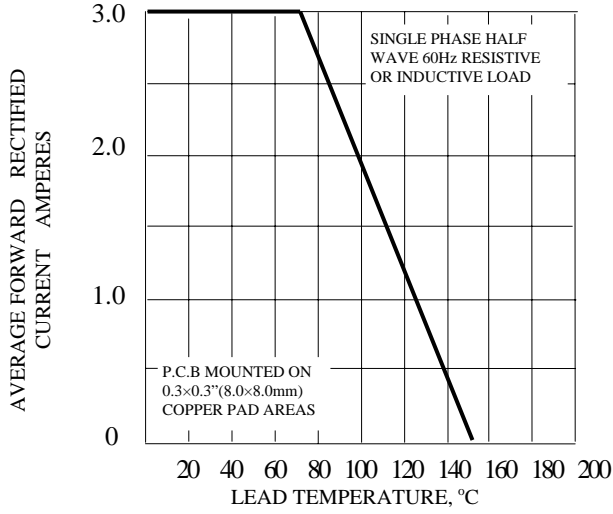


FIG. 2 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

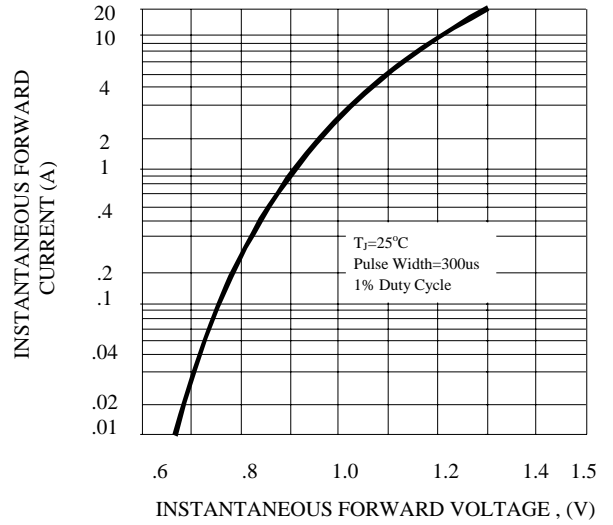


FIG. 3 -PEAK FORWARD SURGE CURRENT

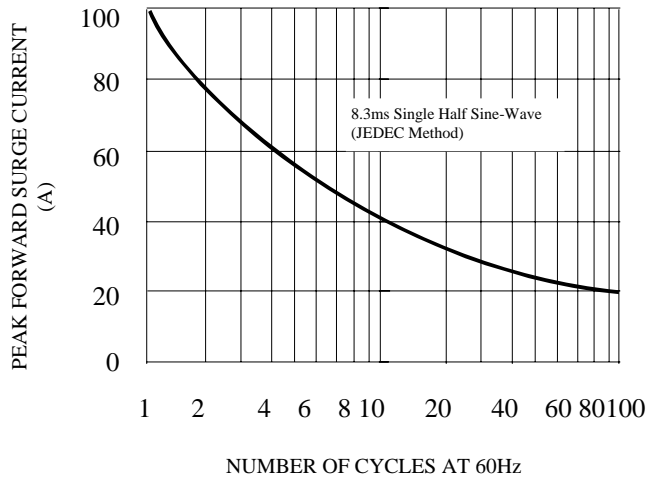


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

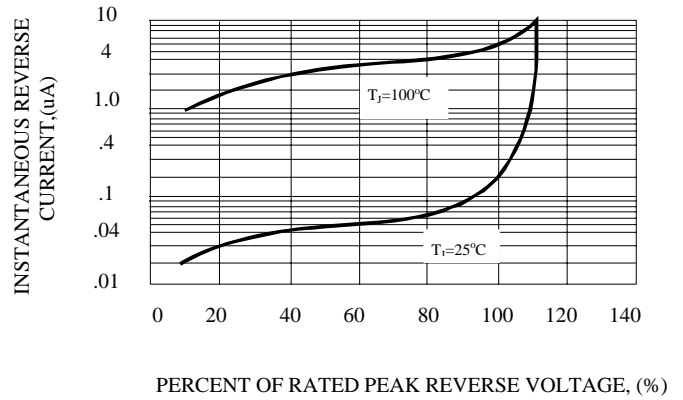


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

