



# 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>

## 1A SCHOTTKY BARRIER RECTIFIERS

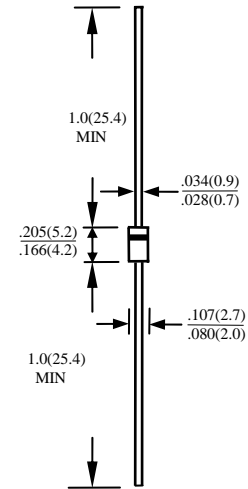
**1N5817-LFR 1N5818-LFR 1N5819-LFR**

### FEATURES

- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- EXTREMELY LOW VF
- LOW POWER LOSS/HIGH EFFICIENCY
- LOW STORED CHARGE, MAJORITY CARRIER CONDUCTION
- LEAD FREE

### MECHANICAL DATA

- CASE: TRANSFER MOLDED, DO41, DIMENSIONS IN INCHES AND (MILLIMETERS)
- LEADS: SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: CATHODE INDICATED BY COLOR BAND
- WEIGHT: 0.34 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	1N5817-LFR	1N5818-LFR	1N5819-LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	$V_{RRM}$	20	30	40	V
MAXIMUM RMS VOLTAGE	$V_{RMS}$	14	21	28	V
MAXIMUM DC BLOCKING VOLTAGE	$V_{DC}$	20	30	40	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375" (9.5mm) LEAD LENGTH (SEE FIG.1)	$I_O$	1.0			A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	25			A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	$C_J$	110			PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	50			°C/W
STORAGE TEMPERATURE RANGE	$T_{STG}$	- 55 TO + 125			°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	- 55 TO + 125			°C

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

CHARACTERISTICS	SYMBOL	1N5817-LFR	1N5818-LFR	1N5819-LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_O$ DC	$V_F$	0.45	0.55	0.60	V
MAXIMUM REVERSE CURRENT AT 25°C	$I_R$	1.0			mA
MAXIMUM REVERSE CURRENT AT 100°C	$I_R$	10.0			mA

- NOTES: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS  
2. BOTH LEADS ATTACHED TO HEAT SINK 20x20x1t(mm) COPPER PLATE AT LEAD LENGTH 5mm

# RATINGS AND CHARACTERISTIC CURVE 1N5817-LFR THRU 1N5819-LFR

FIG. 1 - FORWARD CURRENT DERATING CURVE

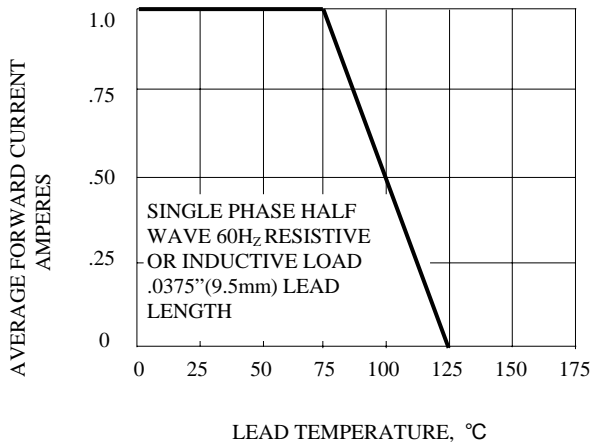


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

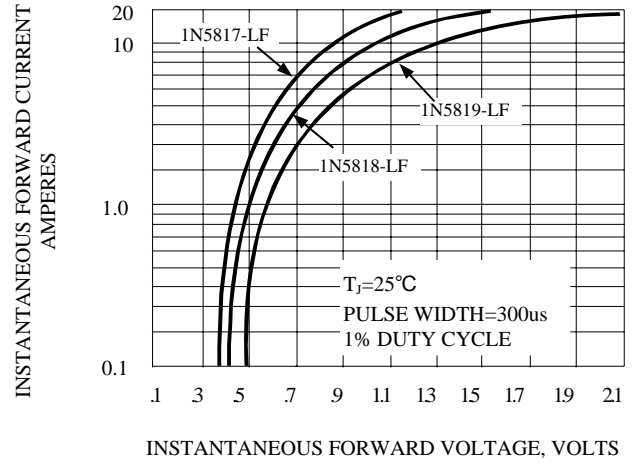


FIG. 4 - MAXIMUM NON-REPEATABLE FORWARD SURGE CURRENT

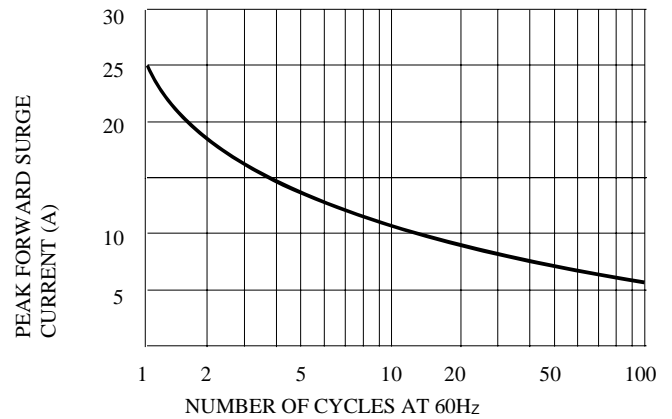


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

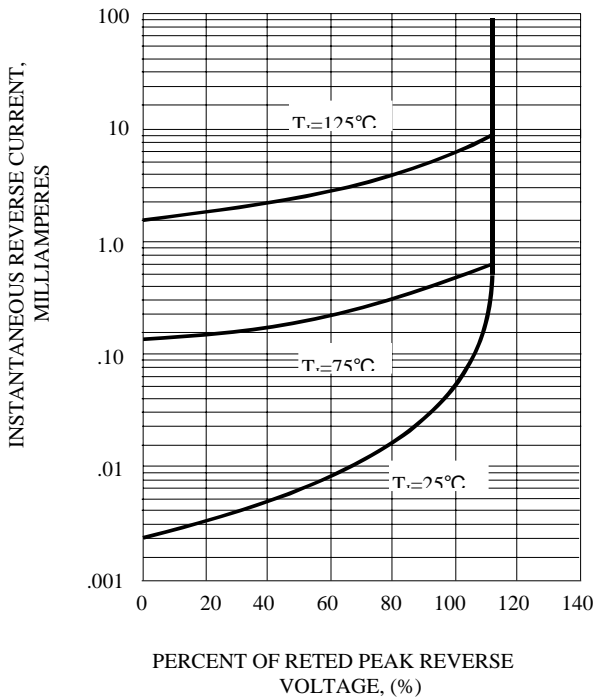


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

