Frontier Electronics Corp.

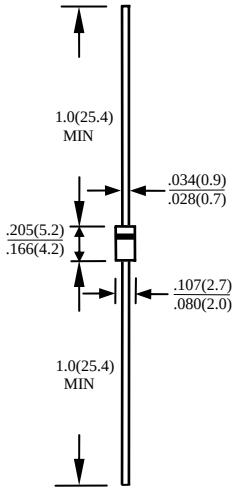
667 E. COCHRAN STREET, SIMI VALLEY, CA 93065
TEL: (805) 522-9998 FAX: (805) 522-9989
E-mail: frontiersales@frontierusa.com
Web: http://www.frontierusa.com

1A GENERAL PURPOSE PLASTIC RECTIFIER

EM513-LFR THRU EM520-LFR

FEATURES

- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- DIFFUSED JUNCTION
- LOW COST
- HIGH SURGE CURRENT CAPABILITY
- ROHS



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	EM513-LFR	EM516-LFR	EM520-LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	1600	1800	2000	V
MAXIMUM RMS VOLTAGE	V_{RMS}	1120	1260	1400	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	1600	1800	2000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375"(9.5mm) LEAD LENGTH AT TA=55°C	I_O	1.0			A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	30			A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	15			PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	50			℃/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 175			℃
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 175			℃

ELECTRICAL CHARACTERISTICS (AT T_A =25℃ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	EM513-LFR	EM516-LFR	EM520-LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.1			V
MAXIMUM REVERSE CURRENT AT 25℃	I_R	5			μA
MAXIMUM REVERSE CURRENT AT 100℃	I_R	50			μA

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

RATINGS AND CHARACTERISTIC CURVES EM513-LFR THRU EM520-LFR

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

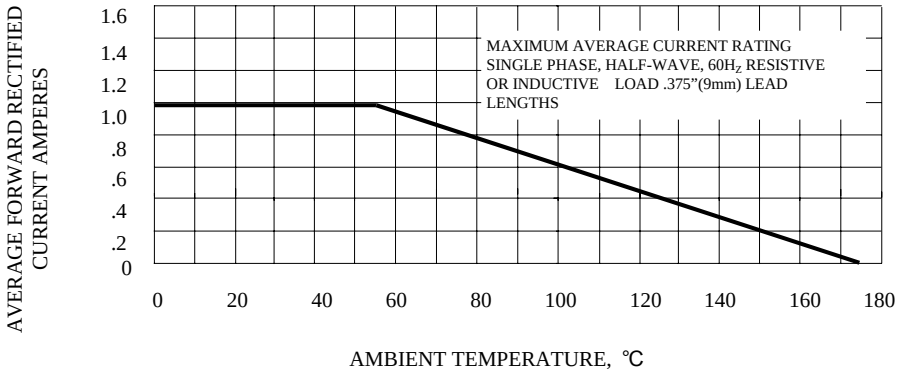


FIG. 2 - TYPICAL FORWARD CHARACTERISTICS

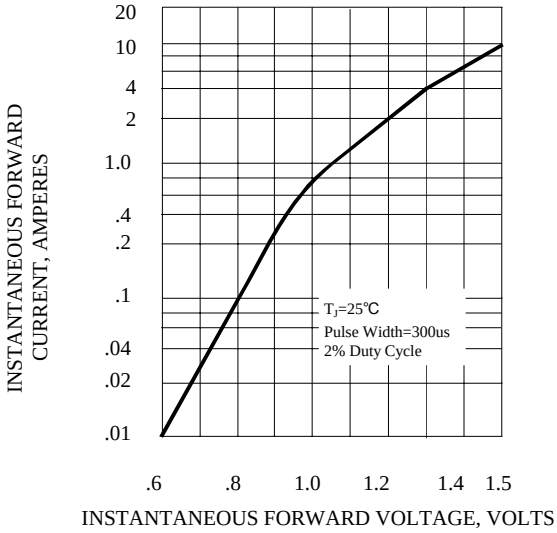


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

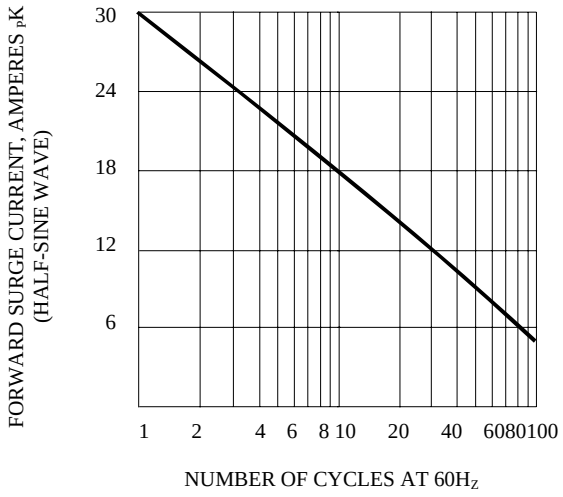


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

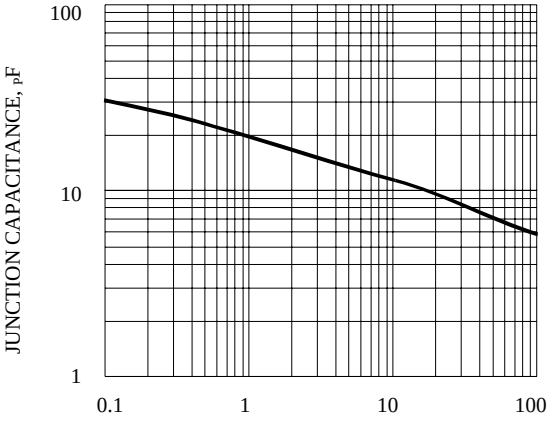


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS