



# Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

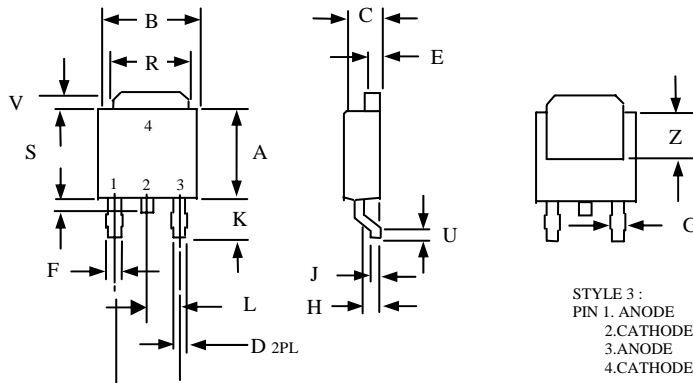
TEL: (805) 522-9998 FAX: (805) 522-9989

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

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

## 12A DUAL SCHOTTKY BARRIER RECTIFIERS

### MBRD1220CT-LFR THRU MBRD1240CT-LFR



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.235	0.250	5.97	6.35
B	0.250	0.265	6.35	6.37
C	0.086	0.094	2.19	2.38
D	0.027	0.035	0.69	0.88
E	0.033	0.040	0.84	1.01
F	0.037	0.047	0.94	1.19
G	0.180 BSC		4.58 BSC	
H	0.034	0.040	0.87	1.01
J	0.018	0.023	0.48	0.58
K	0.102	0.114	2.60	2.89
L	0.090 BSC		2.29 BSC	
R	0.175	0.215	4.45	5.46
S	0.020	0.050	0.51	1.27
U	0.020	----	0.51	----
V	0.030	0.050	0.77	1.27
Z	0.138	----	3.51	----

#### FEATURES

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

#### MECHANICAL DATA

- CASE: TRANSFER MOLDED, DPAK
- LEADS: SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: AS MARKED
- WEIGHT: 1.8 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	MBRD1220CT-LFR	MBRD1230CT-LFR	MBRD1240CT-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 SEE FIG.1 PER LEG	$I_O$	12.0 6.0			A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD PER LEG	$I_{FSM}$	120			A
TYPICAL THERMAL RESISTANCE JUNCTION TO CASE AT 25°C PER LEG	$R_{\theta jc}$	2.43			°C/W
STORAGE TEMPERATURE RANGE	$T_{STG}$	- 55 TO + 150			°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	- 55 TO + 125			°C

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

CHARACTERISTICS	SYMBOL	MBRD1220CT-LFR	MBRD1230CT-LFR	MBRD1240CT-LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT 6A PER LEG	$V_F$	0.55			V
MAXIMUM REVERSE CURRENT AT 25°C PER LEG (NOTE 1)	$I_R$	5.0			mA
MAXIMUM REVERSE CURRENT AT 100°C PER LEG (NOTE 1)	$I_R$	50.0			mA

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

# RATINGS AND CHARACTERISTIC CURVES MBRD1220CT-LFR THRU MBRD1240CT-LFR

FIG. 1 - FORWARD CURRENT DERATING CURVE

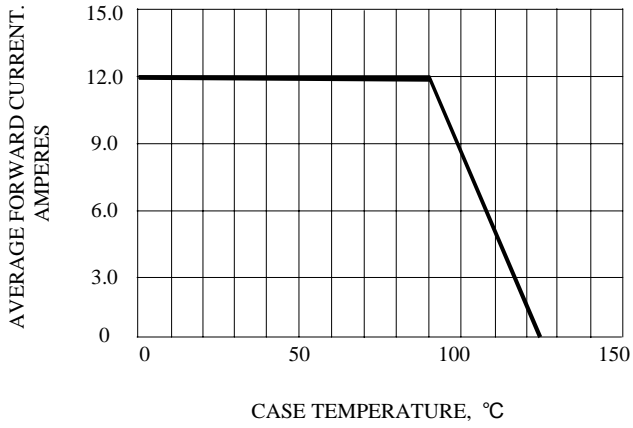


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

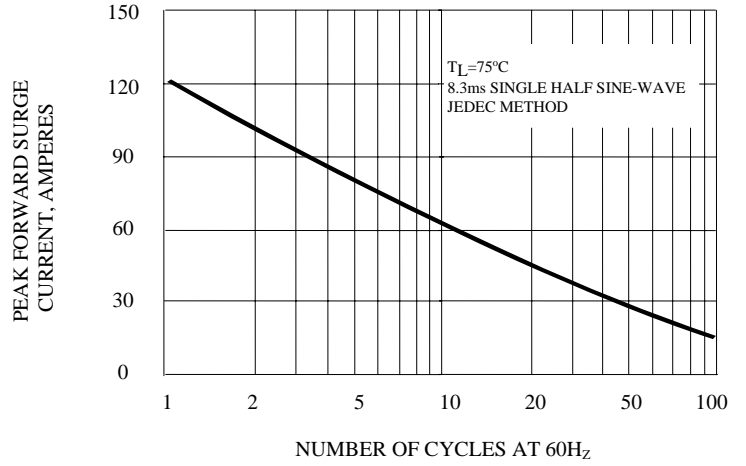


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

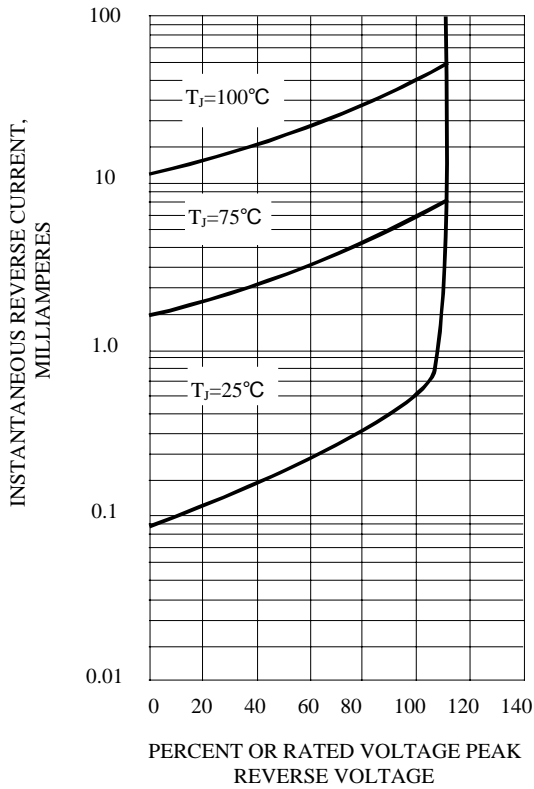


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

