



# Frontier Electronics Corp.

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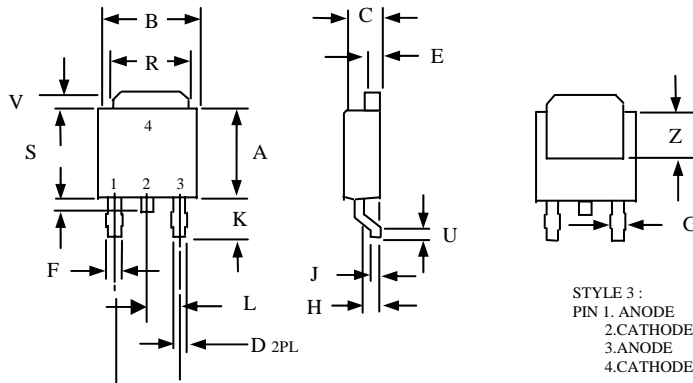
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## 6A DUAL SCHOTTKY BARRIER RECTIFIERS

### MBRD620CT THRU MBRD660CT



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

### 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	MBRD620CT	MBRD630CT	MBRD640CT	MBRD660CT	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	$V_{RRM}$	20	30	40	60	V
MAXIMUM RMS VOLTAGE	$V_{RMS}$	14	21	28	42	V
MAXIMUM DC BLOCKING VOLTAGE	$V_{DC}$	20	30	40	60	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT SEE FIG.1 PER LEG	$I_O$	6.0 3.0				A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD PER LEG	$I_{FSM}$	75				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 (AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	MBRD620CT	MBRD630CT	MBRD640CT	MBRD660CT	UNITS
MAXIMUM FORWARD VOLTAGE AT 3A PER LEG	$V_F$	0.55			0.70	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 MBRD1020CT THRU MBRD1040CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

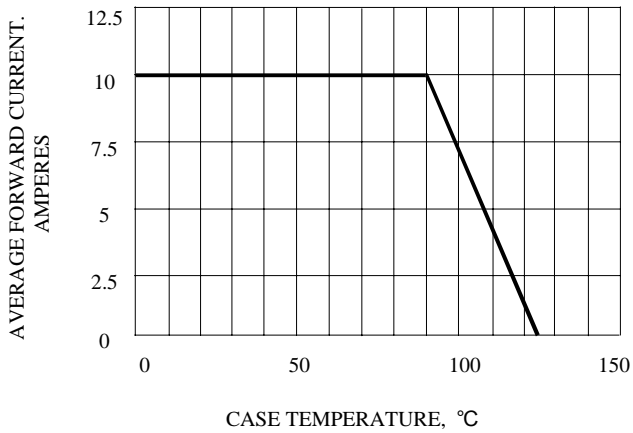


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

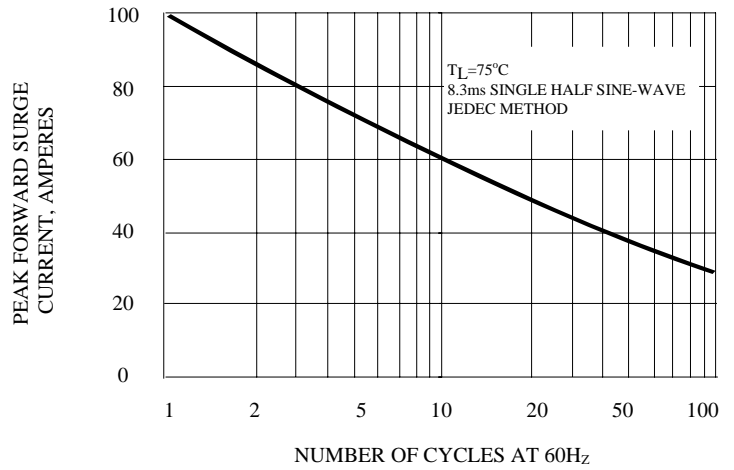


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

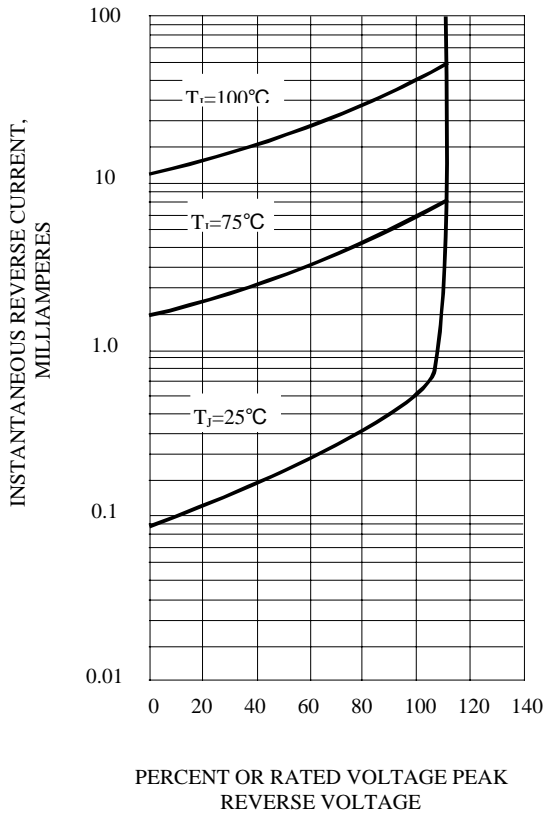


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

