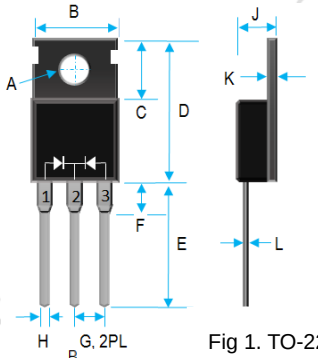
MBR4040(F)CT THRU MBR40200(F)CT SPECIFICATION

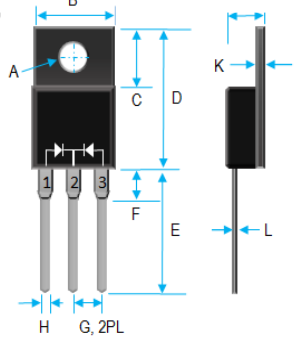
Rev. A

40A SCHOTTKY BARRIER RECTIFIERS



Dim.	Value Inch[mm] Min.	Max.
A	0.139 [3.55]	---
B	0.387 [9.85]	0.419 [10.66]
C	0.226 [5.75]	0.269 [6.85]
D	0.548 [13.93]	0.624 [15.87]
E	0.50 [12.70]	---
F	---	0.177 [4.50]
G	0.095[2.41]	0.105[2.67]
H	0.019 [0.50]	0.038 [0.96]
J	0.163 [4.16]	0.196 [5.00]
K	0.045 [1.15]	0.054 [1.39]
L	---	0.025 [0.65]

Fig 1. TO-220AB FOR MBR40xxxCT



Dim.	Value Inch[mm] Min.	Max.
A	0.118 [3.0]	0.134 [3.4]
B	0.381 [9.7]	0.406[10.3]
C	0.248 [6.3]	0.272 [6.9]
D	0.583 [14.8]	0.606 [15.4]
E	0.512 [13.0]	0.548 [13.9]
F	---	0.161 [4.1]
G	0.095[2.41]	0.105[2.67]
H	0.019 [0.50]	0.028 [0.7]
J	0.165 [4.2]	0.189 [4.8]
K	0.099 [2.5]	0.130 [3.3]
L	---	0.032 [0.8]

Fig 2. ITO-220AB FOR MBR40xxxFCT

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. EXTREMELY LOW V_F
3. LOW STORED CHARGE
4. MAJORITY CARRIER CONDUCTION
5. LOW POWER LOSS/HIGH EFFICIENCY
6. CASE: TRANSFER MOLDED
   TO-220AB FOR MBR40xxxCT
   ITO-220AB FOR MBR40xxxFCT
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-202 METHOD 208
9. WEIGHT: 2.15 GRAMS (TO-220AB)
   1.55GRAMS (ITO-220AB)
10. RoHS COMPLIANT AND HALOGEN FREE

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL		UNITS
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT, SEE FIG.1	I_O	40 PER DEVICE (20 PER LEG)	A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	400	A
TYPICAL THERMAL RESISTANCE	$R_{\theta jC}$	2.2 (4.0 FOR ≥100V DEVICE)	°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	- 65 TO +175	°C
MAXIMUM REVERSE CURRENT AT 25°C PER LEG (NOTE 1)	I_R	0.1 (0.01mA FOR ≥100V DEVICE)	mA
MAXIMUM REVERSE CURRENT AT 125°C PER LEG (NOTE 1)	I_R	15	mA
ISOLATION VOLTAGE FROM TERMINAL TO HEATSINK T=1MIN		1500 (FOR MBR40xxxFCT ONLY)	VAC

PART NUMBER	MAX RECURRENT PK REVERSE VOLTAGE/DC BLOCKING V_{RRM}/V_R (V)	MAX V_{RMS} (V)	OPERATING TEMPERATURE RANGE (°C)	MAXIMUM FORWARD VOLTAGE V_F @ I_F=20A @25°C	@125°C
MBR4040(F)CT	40	28	- 55 TO +150	0.65V	0.57V
MBR4045(F)CT	45	31.5	- 55 TO +150	0.65V	0.57V
MBR4060(F)CT	60	42	- 55 TO +150	0.75V	0.70V
MBR40100(F)CT	100	70	- 55 TO +150	0.85V	0.75V
MBR40150(F)CT	150	105	- 55 TO +175	0.95V	0.85V
MBR40200(F)CT	200	140	- 55 TO +175	0.95V	0.85V

NOTE： 1. PULSE TEST: 300μS PULSE WIDTH, 1% DUTY CYCLE.
2. CURRENT RATING IS BASED ON SINGLE PHASE, 1/2 WAVE, 60HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD DERATING CURVE

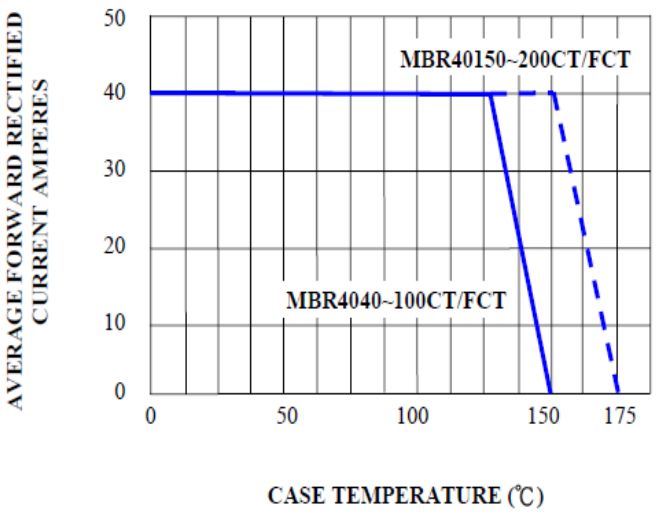


FIG. 2 - PEAK FORWARD SURGE CURRENT

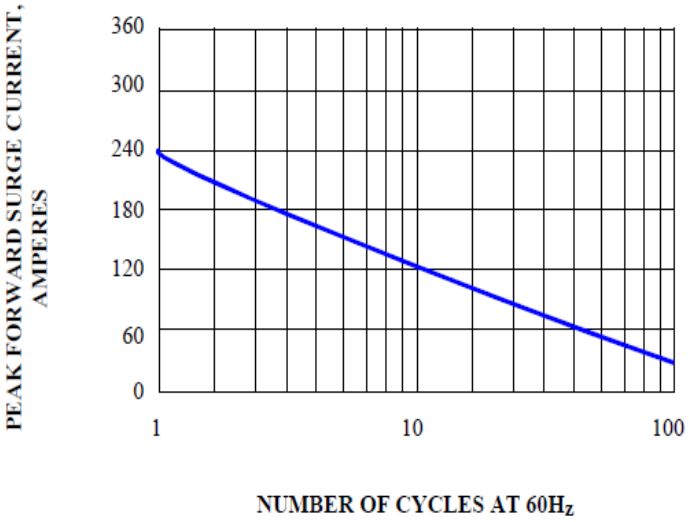


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

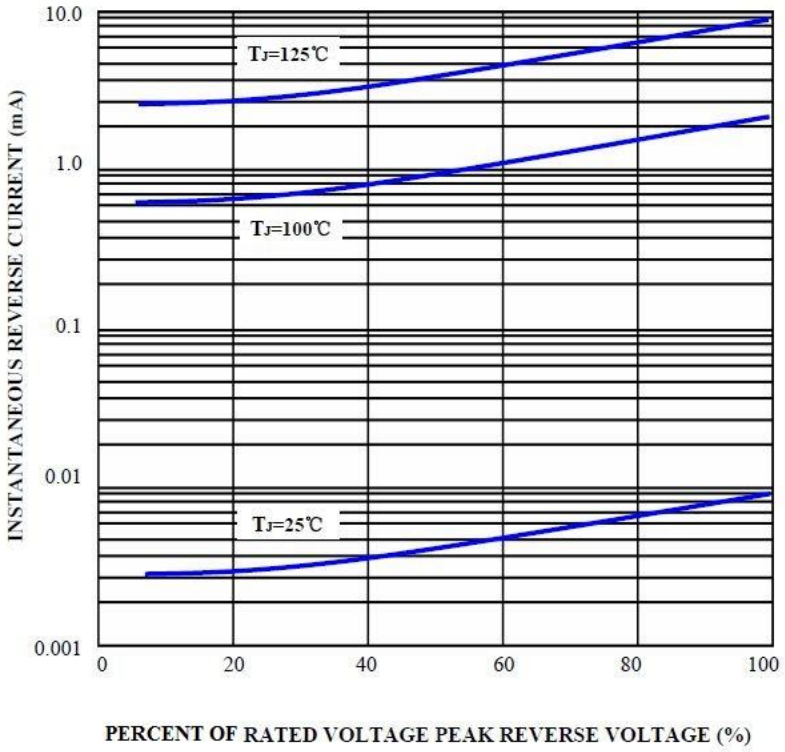
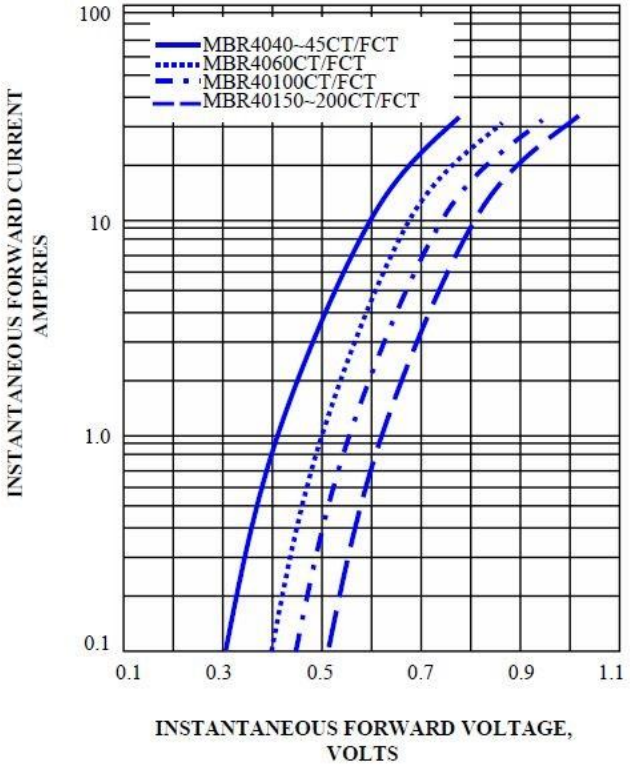


FIG. 4 - TYPICAL FORWARD CHARACTERISTIC PER LEG



667 E. Cochran St., Simi Valley, CA 93065
Phone: 1-805-522-9998, Fax: 1-805-522-9989