

40A ULTRA LOW V_F TRENCH MOS SCHOTTKY RECTIFIERS

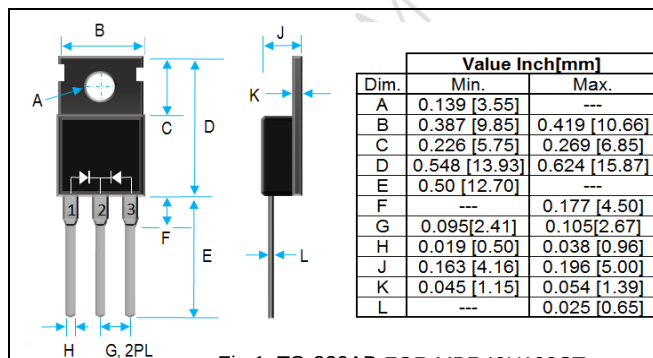


Fig 1. TO-220AB FOR MBR40U100CT

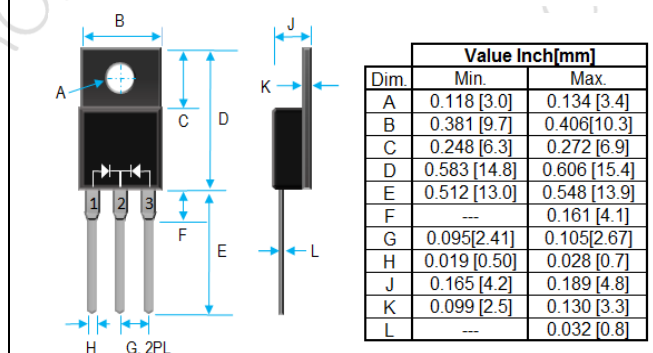


Fig 2. ITO-220AB FOR MBR40U100FCT

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. EXTREMELY LOW V_F
3. TRENCH MOS SCHOTTKY TECHNOLOGY
4. LOW POWER LOSS / HIGH EFFICIENCY
5. HIGH FREQUENCY OPERATION
6. CASE: TRANSFER MOLDED
TO-220AB FOR MBR40U100CT
ITO-220AB FOR MBR40U100FCT
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/HALOGEN FREE

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL		UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	100	VDC
MAXIMUM RMS VOLTAGE	V_{RMS}	70	VAC
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	100	VDC
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 PER LEG	I_{FSM}	300	A
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO +175	$^\circ\text{C}$
OPERATING TEMPERATURE RANGE	T_J	- 55 TO +150	$^\circ\text{C}$
MAXIMUM FORWARD VOLTAGE AT $I_F = 20\text{A}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ $I_F = 10\text{A}$ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	V_F	0.75 0.65 0.55 0.50	V
MAXIMUM REVERSE CURRENT AT 25°C , PER LEG (NOTE 1)	I_R	0.2	mA
MAXIMUM REVERSE CURRENT AT 125°C , PER LEG (NOTE 1)	I_R	45	mA
TYPICAL THERMAL RESISTANCE JUNCTION TO CASE PER LEG	$R_{\theta jc}$	MBR40U100CT: 2.2 MBR40U100FCT: 4.0	$^\circ\text{C/W}$
ISOLATION VOLTAGE FROM TERMINAL TO HEATSINK $T = 1\text{MIN}$		1500 (FOR MBR40U100FCT)	VAC

NOTE : 1. PULSE TEST: 300 μs PULSE WIDTH, 1% DUTY CYCLE.

RATINGS AND CHARACTERISTIC CURVES

FIG. 1-FORWARD CURRENT DERATING CURVE

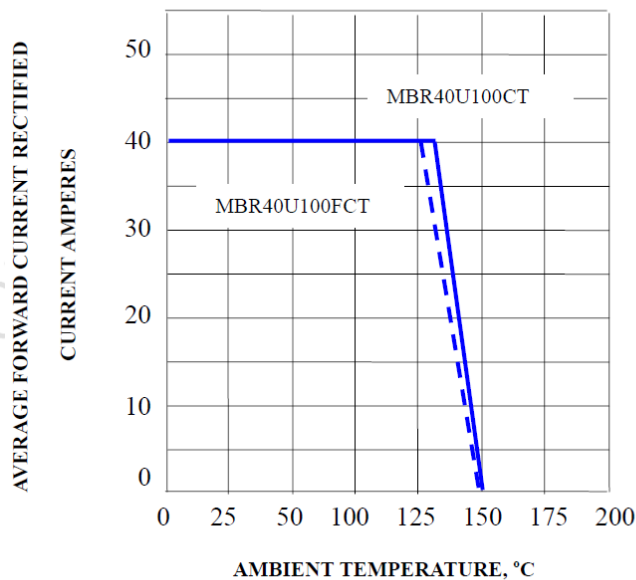


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE RATING

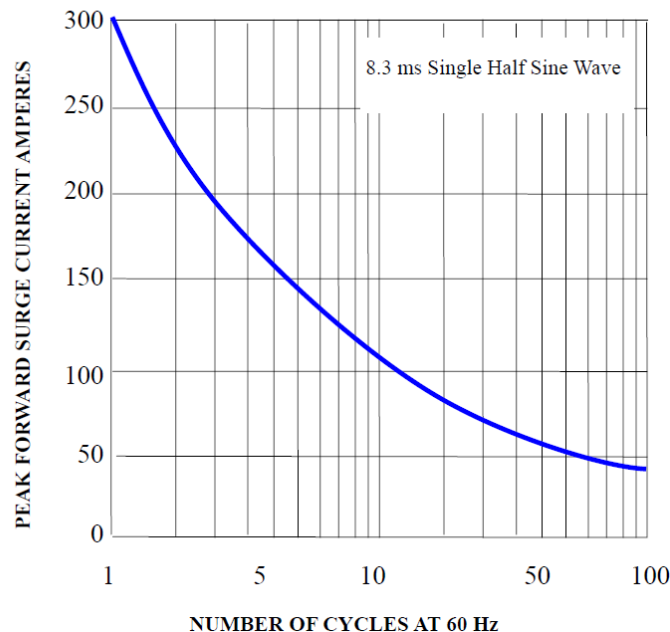


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

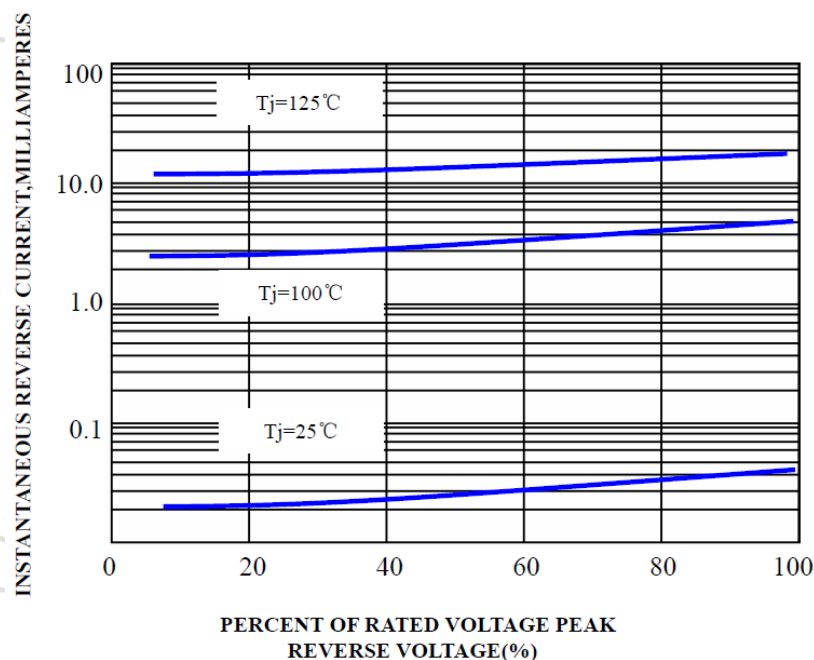


FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

