



Reverse Voltage: 100Volts
Forward Current: 40Amperes

Features

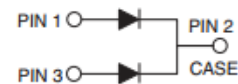
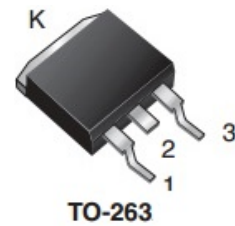
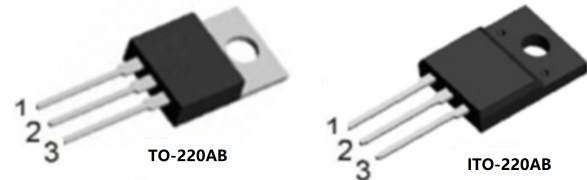
- ◇ Trench Schottky Barrier technology
- ◇ Ultra low forward voltage drop
- ◇ Low power loss,high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ High current capability
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.

Applications

- ◇ Switching diode
- ◇ Switching mode power supply(SMPS)
- ◇ DC/DC converter
- ◇ LED lighting
- ◇ Adapter for notebook and game station

Mechanical Data

- ◇ Moisture Sensitivity: MSL Level 1,per J-STD-020
- ◇ Terminals:Matte Tin Finish.
Solderable per MIL-STD-202 Method 208
- ◇ Case Material: Molded Plastic;
Molding compound meet UL Flammability ClassificationRating 94V-0
- ◇ Case:JEDEC TO-220AB,ITO-220AB,TO-263



MAXIMUM RATING

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RWS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum average forward rectified current	$I_{F(AV)}$	40 20	A
Peak forward surge current 8.3ms half-sine-wave	I_{FSM}	300	A
I^2t Rating for Fusing($t < 8.3ms$)	I^2t	373.5	A ² s
Typical Thermal Resistance	TO-220AB	$R_{\theta JA}$	23 °C/W
		$R_{\theta JC}$	2.5 °C/W
		$R_{\theta JL}$	3.0 °C/W
	ITO-220AB	$R_{\theta JC}$	4.5 °C/W
	TO-263	$R_{\theta JC}$	2.5 °C/W
Typical junction capacitance: $V_R=4.0v, f=1MHz$	C_J	830	pF
Junction temperature	T_J	150	°C
Storage temperature range	T_{STG}	-55~150	°C



ELELTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	VALUE			UNITS
				Min	Typ	Max	
Breakdown voltage per diode(min)	IR=0.5mA		VB _R	45	-	-	V
Instantaneous forward voltage	IF=20A per leg	TA= 25°C	VF	-	0.65	0.70	V
		TA= 125°C	VF	-	0.62	0.65	V
	IF=5A per leg	TA= 25°C	VF	-	0.42	0.52	V
		TA= 125°C	VF	-	0.34	-	V
Maximum DC reverse current @Rated DC Blocking Vlotage	T _A = 25°C		IR	-	30	200	μ A
	T _A = 100°C		IR	-	3	5	mA
	T _A =125°C		IR	-	12	20	mA

ODERING PACK INFORMATION

Part No.	Packge	Pcking	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
MBR40100LCT	TO-220AB	50pcs/Tube	558×148×38	1000	565×225×170	5000
MBRF40100LCT	ITO-220AB	50pcs/Tube	558×148×38	1000	565×225×170	5000
MBRB40100LCT	TO-263	50pcs/Tube	560×178×35	1000	585×385×220	10000
MBRB40100LCT	TO-263	800pcs/Reel	340×336×36	800	400×353×365	8000

RATINGS AND CHARACTERISTIC CURVES


FIG.1-FORWARD CURRENT DERATING CURVE

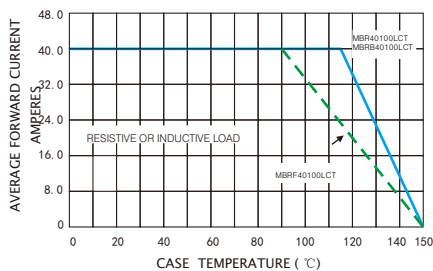


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

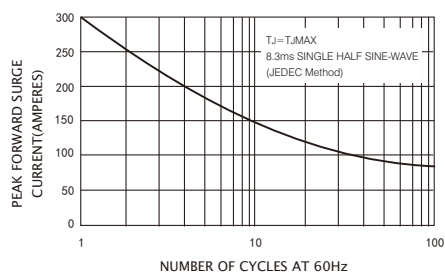


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

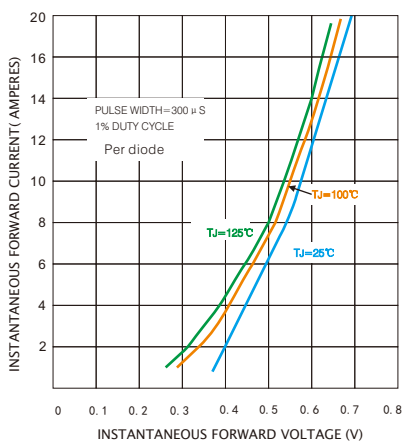


FIG.4-TYPICAL REVERSE CHARACTERISTICS

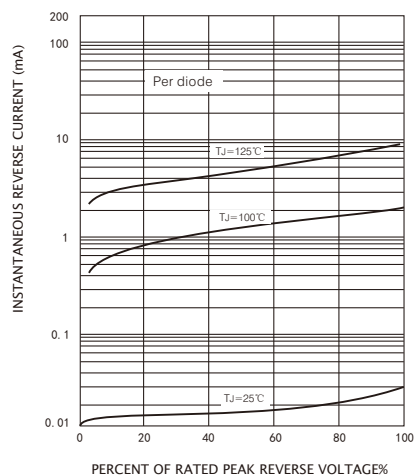
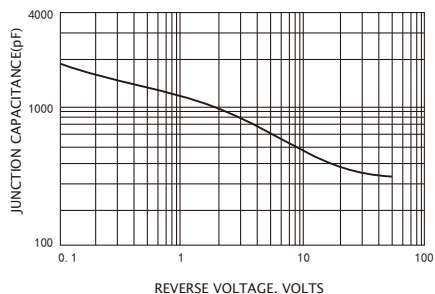


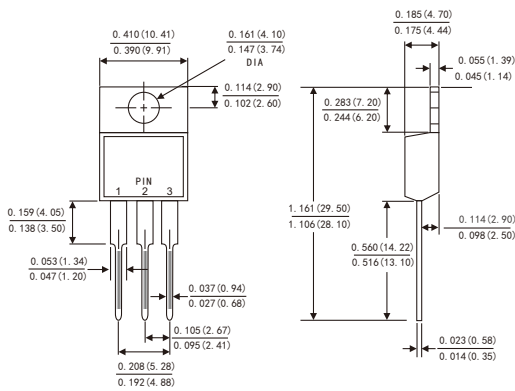
FIG.5-TYPICAL JUNCTION CAPACITANCE



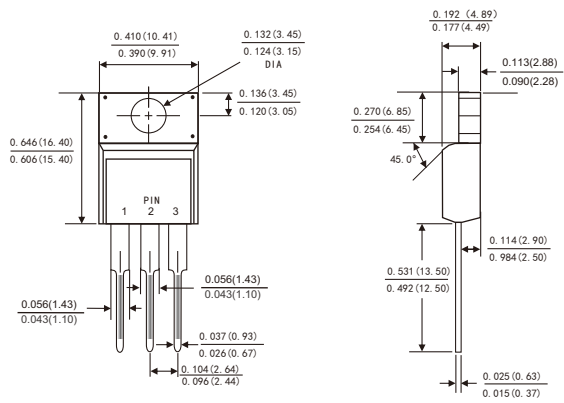


Dimensions in inches and (millimeters)

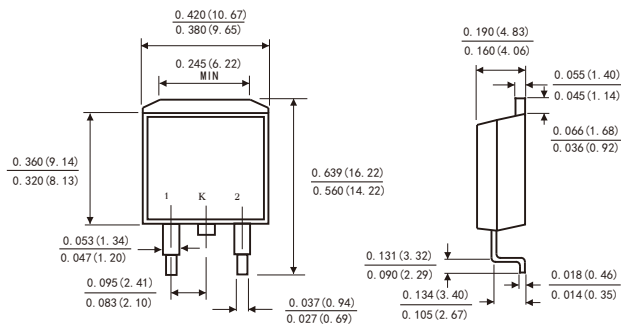
TO-220AB



ITO-220AB



TO-263



Suggested Pad Layout

