

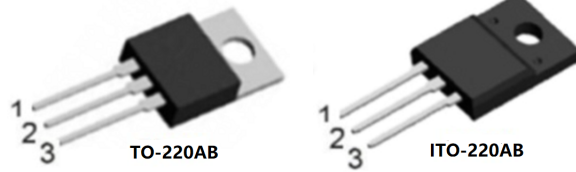


Reverse Voltage: 40Volts

Forward Current:10.0Amperes

Features

- ◇ Negligible switching lossess
- ◇ Low forward voltage drop
- ◇ Low power loss,high efficiency
- ◇ Excellent low reverse leakages
- ◇ High Junction temperature stability
- ◇ High current capability
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.



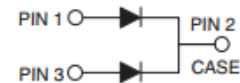
Applications

- ◇ 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-252,TO-263



MAXIMUM RATING

Ratings at 25°C ambient tepmerature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	40	V	
Maximum RMS voltage	V_{RWS}	32	V	
Maximum DC blocking voltage	V_{DC}	40	V	
Maximum average forward rectified current	$I_{F(AV)}$	10	A	
Total device Per diode		5		
Peak forward surge current 8.3ms half-sine-wave	I_{FSM}	150	A	
I^2t Rating for Fusing($t < 8.3ms$)	I^2t	93.375	A^2s	
Typical Thermal Resistance	TO-220AB	$R_{\theta JA}$	15.2	$^{\circ}C/W$
		$R_{\theta JC}$	3.5	$^{\circ}C/W$
		$R_{\theta JL}$	3.8	$^{\circ}C/W$
	ITO-220AB	$R_{\theta JC}$	4.5	$^{\circ}C/W$
	TO-252	$R_{\theta JC}$	2.5	$^{\circ}C/W$
TO-263	$R_{\theta JC}$	2.5	$^{\circ}C/W$	
Typical junction capacitance: $V_R=4.0v, f=1MHz$	C_J	370	pF	
Junction temperature	T_J	150	$^{\circ}C$	
Storage temperature range	T_{STG}	-55~150	$^{\circ}C$	



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=5.0A	TA= 25°C	-	0.52	0.55	V
		TA= 125°C	-	0.42	0.45	V
Maximum DC reverse current @Rated DC Blocking Vlotage	TA= 25°C	IR	-	50	100	μ A
	TA=125°C	IR	-	20	50	mA

ODERING PACK INFORMATION

Part No.	Packge	Packing	Quatity(pcs/box)	Quatity(pcs/carton)
MBR1040LCT	TO-220	50pcs/Tube	1000	5000
MBRF1040LCT	ITO-220	50pcs/Tube	1000	5000
MBRD1040LCT	TO-252	80pcs/Tube	4000	40000
MBRD1040LCT	TO-252	2500pcs/Reel	2500	12500/25000
MBRB1040LCT	TO-263	50pcs/Tube	1000	5000/10000
MBRB1040LCT	TO-263	800pcs/Reel	800	4000/8000



RATING AND CHARACTERISTICS CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

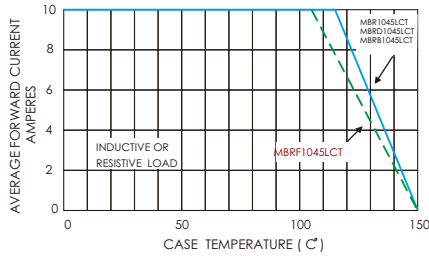


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

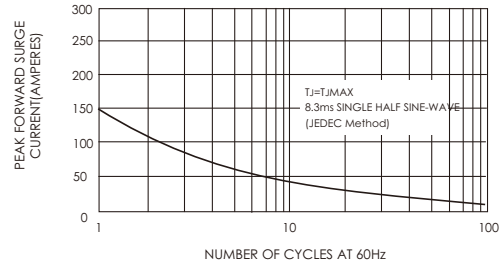


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

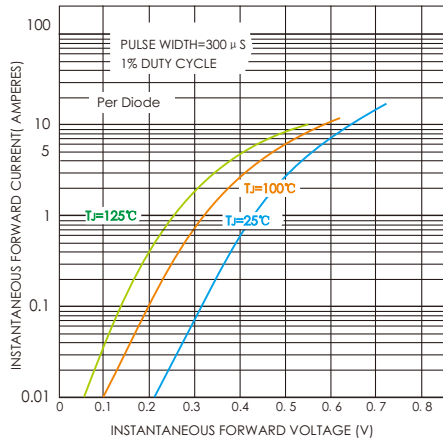


FIG.4-TYPICAL REVERSE CHARACTERISTICS

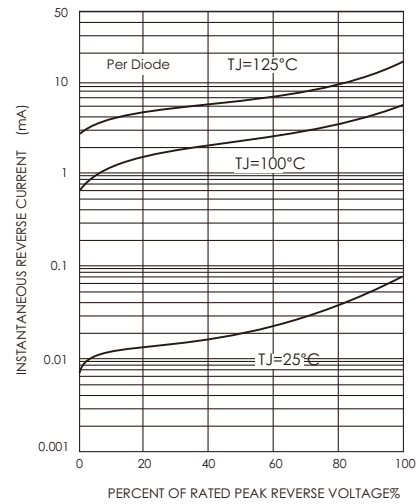
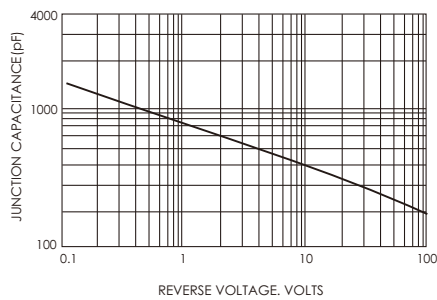


FIG.5-TYPICAL JUNCTION CAPACITANCE

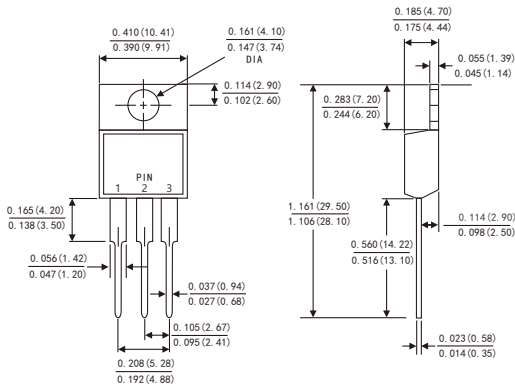




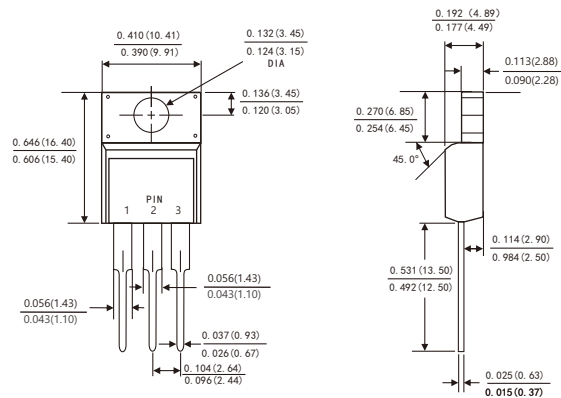
PACKAGE OUTLINE DIMENSIONS

Dimensions in inches and (millimeters)

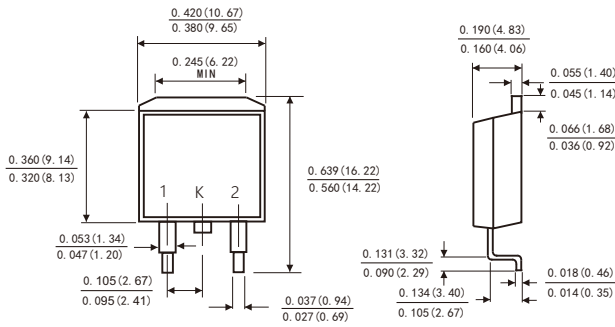
TO-220AB



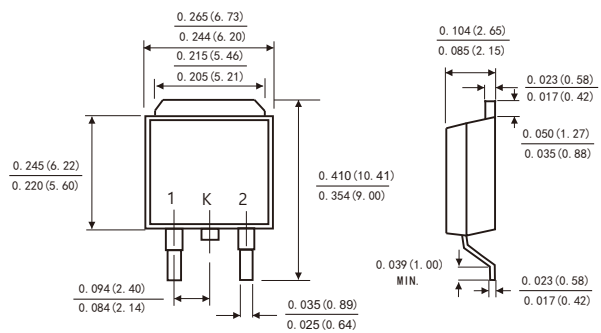
ITO-220AB



TO-263

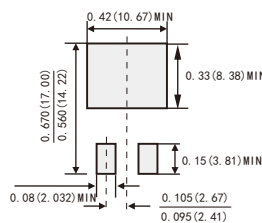


TO-252



Suggested Pad Layout

(TO-263)



Suggested Pad Layout

(TO-252)

