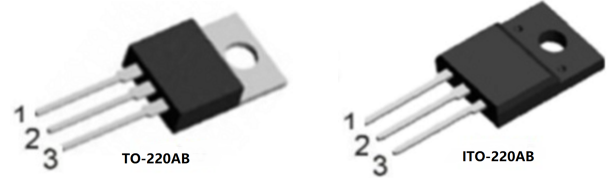


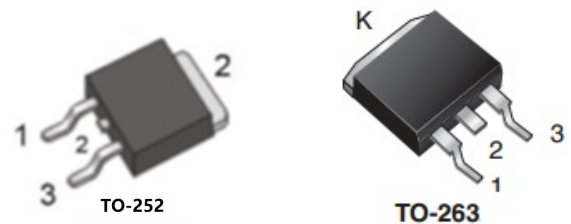
## Features

- ◇ 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.



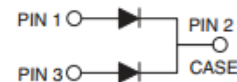
## Applications

- ◇ 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 Classification Rating 94V-0
- ◇ Case:JEDEC TO-220AB,ITO-220AB,TO-252,TO-263



## MAXIMUM RATING

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	V
Maximum RMS voltage	$V_{RWS}$	140	V
Maximum DC blocking voltage	$V_{DC}$	200	V
Maximum average forward rectified current	$I_{F(AV)}$	20	A
per device Per diode		10	
Peak forward surge current 8.3ms half-sine-wave	$I_{FSM}$	200	A
$I^2t$ Rating for Fusing( $t < 8.3ms$ )	$I^2t$	166	A <sup>2</sup> 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-252	$R_{\theta JC}$	2.5 °C/W
TO-263	$R_{\theta JC}$	2.5 °C/W	
Typical junction capacitance: VR=4.0v,f=1MHz	CJ	580	pF
Junction temperature	$T_J$	150	°C
Storage temperature range	TSTG	-55~150	°C

**ELELTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE			UNITS	
			Min	Typ	Max		
Breakdown voltage per diode(min)	IR=0.5mA	VB <sub>R</sub>	100	-	-	V	
Instantaneous forward voltage	IF=10A per leg	TA= 25°C	VF	-	0.85	0.88	V
		TA= 100°C	VF	-	0.73	-	V
		TA= 125°C	VF	-	0.71	-	V
	IF=5A per leg	TA= 25°C	VF	-	0.77	—	V
		TA= 100°C	VF	-	0.66	-	V
		TA= 125°C	VF	-	0.63	-	V
	IF=3A per leg	TA= 25°C	VF	-	0.72	-	V
		TA= 100°C	VF	-	0.60	-	V
		TA= 125°C	VF	-	0.58	-	V
Maximum DC reverse current @Rated DC Blocking Vlotage	TA= 25°C	IR	-	10.0	200	μ A	
	TA=125°C	IR	-	-	20000	μ A	

**ORDERING PACK INFORMATION**

Part No.	Package	Pcking	Quatity(pcs/box)	Quatity(pcs/carton)
MBR20200LCT	TO-220	50pcs/Tube	1000	5000
MBRF20200LCT	ITO-220	50pcs/Tube	1000	5000
MBRD20200LCT	TO-252	80pcs/Tube	4000	40000
MBRD20200LCT	TO-252	2500pcs/Reel	2500	12500/25000
MBRB20200LCT	TO-263	50pcs/Tube	1000	5000/10000
MBRB20200LCT	TO-263	800pcs/Reel	800	4000/8000

## RATING AND CHARACTERISTICS CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

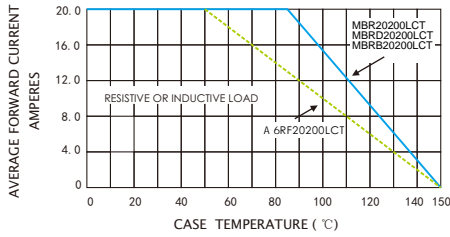


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

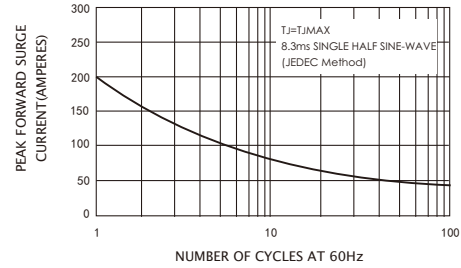


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

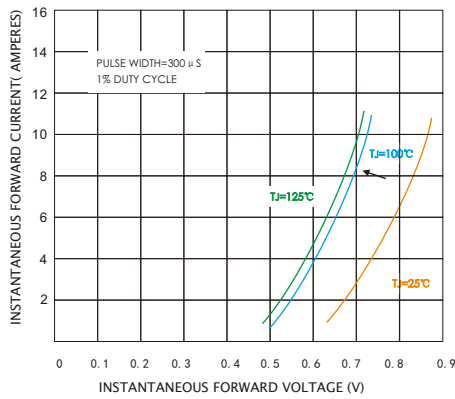


FIG.4-TYPICAL REVERSE CHARACTERISTICS

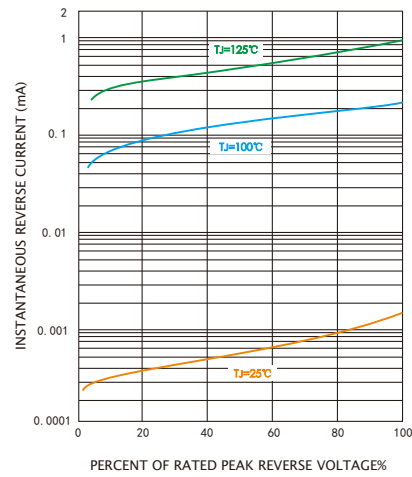
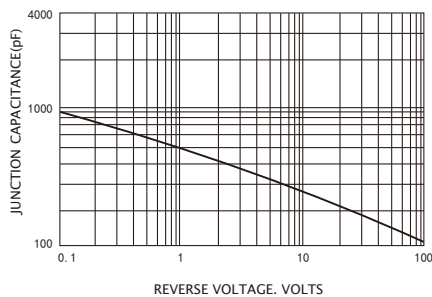


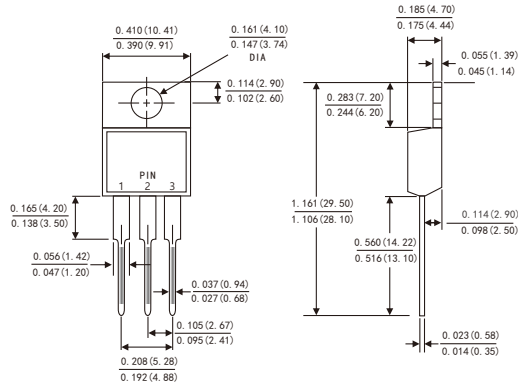
FIG.5-TYPICAL JUNCTION CAPACITANCE



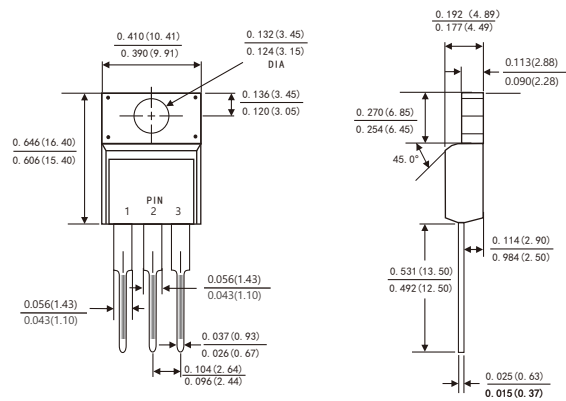
**PACKAGE OUTLINE DIMENSIONS**

Dimensions in inches and (millimeters)

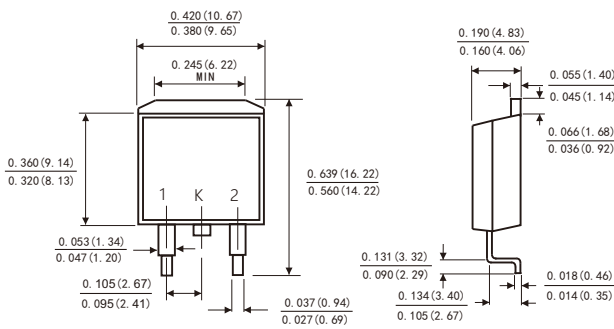
**TO-220AB**



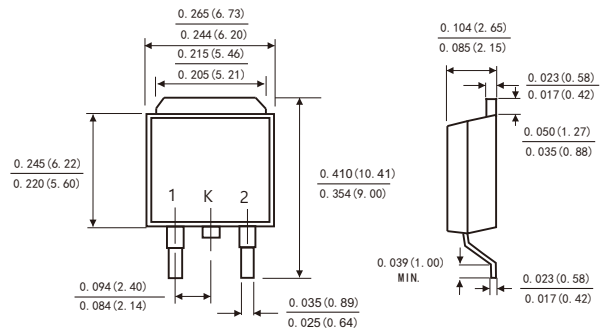
**ITO-220AB**



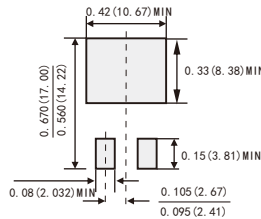
**TO-263**



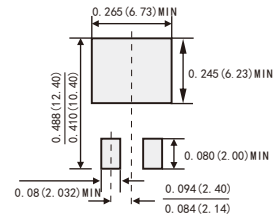
**TO-252**



**Suggested Pad Layout (TO-263)**



**Suggested Pad Layout (TO-252)**



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