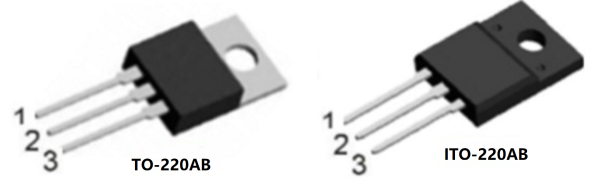




### Features

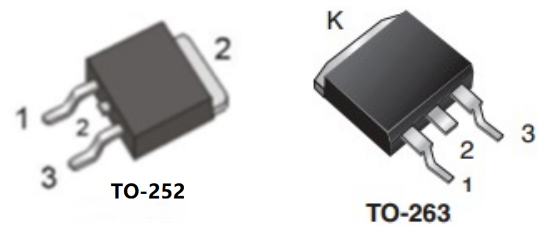
- ◇ Trench Schottky Barrier technology
- ◇ Ultra low forward voltage drop
- ◇ Low power loss,high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ High current capability
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.

Reverse Voltage: 100Volts  
 Forward Current:30.0Amperes



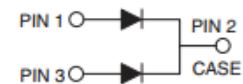
### Applications

- ◇ Switching diode
- ◇ Switching mode power suppluy(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	$V_{RRM}$	100	V	
Maximum RMS voltage	$V_{RWS}$	70	V	
Maximum DC blocking voltage	$V_{DC}$	100	V	
Maximum average forward rectified current	$I_{F(AV)}$	30	A	
per device Per diode		15		
Peak forward surge current 8.3ms half-sine-wave	$I_{FSM}$	250	A	
$I^2t$ Rating for Fusing( $t < 8.3ms$ )	$I^2t$	259	$A^2s$	
Typical Thermal Resistance	TO-220AB	$R_{\theta JA}$	23	$^{\circ}C/W$
		$R_{\theta JC}$	2.5	$^{\circ}C/W$
		$R_{\theta JL}$	3.0	$^{\circ}C/W$
	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: $V_R=4.0v, f=1MHz$	$C_J$	620	pF	
Junction temperature	$T_J$	150	$^{\circ}C$	
Storage temperature range	$T_{STG}$	-55~150	$^{\circ}C$	

**ELECTRICAL CHARACTERISTICS**


PARAMETER	TEST CONDITIONS	SYMBOL	VALUE			UNITS	
			Min	Typ	Max		
Breakdown voltage per diode(min)	IR=0.5mA	$V_{BR}$	100	-	-	V	
Instantaneous forward voltage	IF=15A per leg	TA= 25°C	VF	-	0.70	0.72	V
		TA= 100°C	VF	-	0.68	-	V
		TA= 125°C	VF	-	0.67	-	V
	IF=5A per leg	TA= 25°C	VF	-	0.50	0.52	V
		TA= 100°C	VF	-	0.48	-	V
		TA= 125°C	VF	-	0.47	-	V
Maximum DC reverse current @Rated DC Blocking Voltage	TA= 25°C	IR	-	10	50	μA	
	TA=125°C	IR	-	-	20000	μA	

**ORDERING PACK INFORMATION**

Part No.	Package	Packing	Quantity(pcs/box)	Quantity(pcs/carton)
MBR30100LCT	TO-220	50pcs/Tube	1000	5000
MBRF30100LCT	ITO-220	50pcs/Tube	1000	5000
MBRD30100LCT	TO-252	80pcs/Tube	4000	40000
MBRD30100LCT	TO-252	2500pcs/Reel	2500	12500/25000
MBRB30100LCT	TO-263	50pcs/Tube	1000	5000/10000
MBRB30100LCT	TO-263	800pcs/Reel	800	4000/8000



# MBR30100LCT/MBRF30100LCT MBRD30100LCT/MBRB30100LCT

Low VF Trench Schottky Rectifiers



## RATING AND CHARACTERISTICS CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

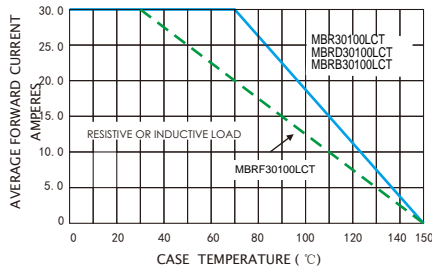


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

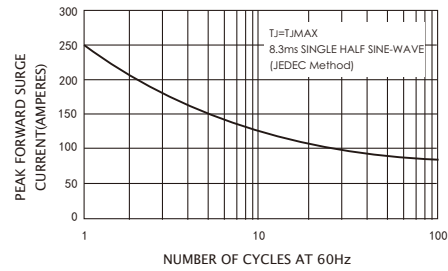


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

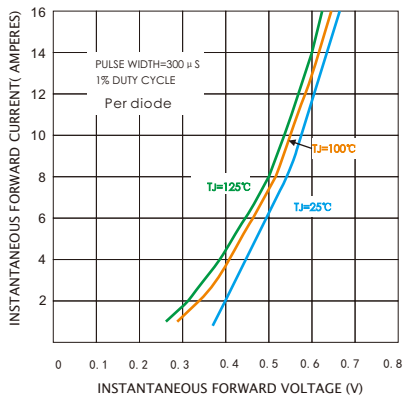


FIG.4-TYPICAL REVERSE CHARACTERISTICS

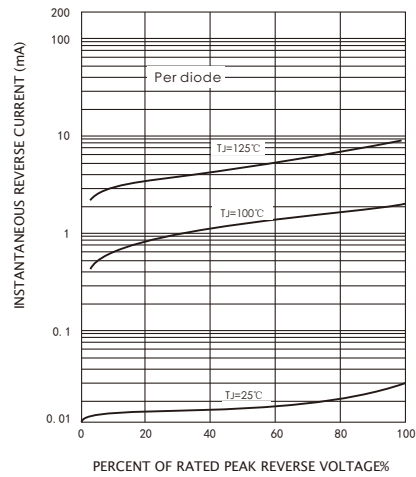
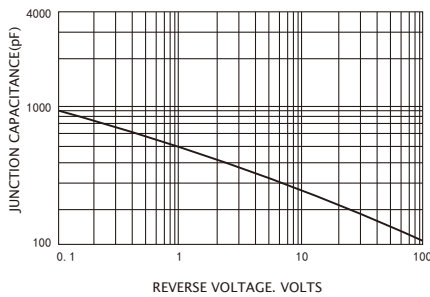


FIG.5-TYPICAL JUNCTION CAPACITANCE





# MBR30100LCT/MBRF30100LCT MBRD30100LCT/MBRB30100LCT

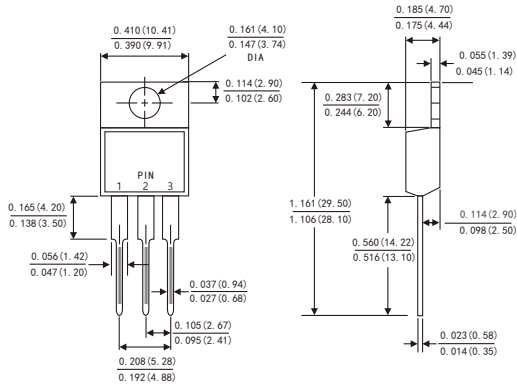
Low VF Trench Schottky Rectifiers



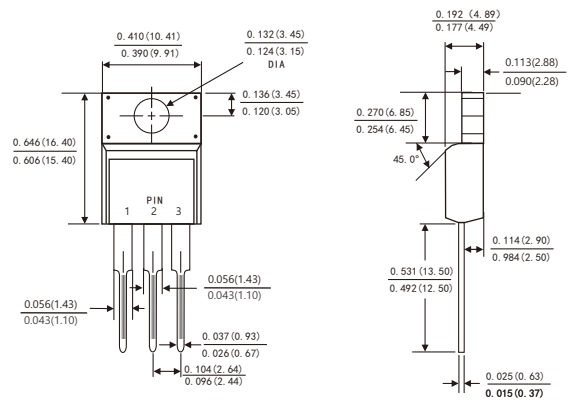
## PACKAGE OUTLINE DIMENSIONS

Dimensions in inches and (millimeters)

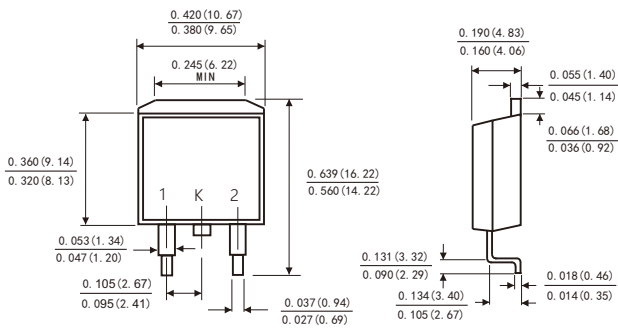
### TO-220AB



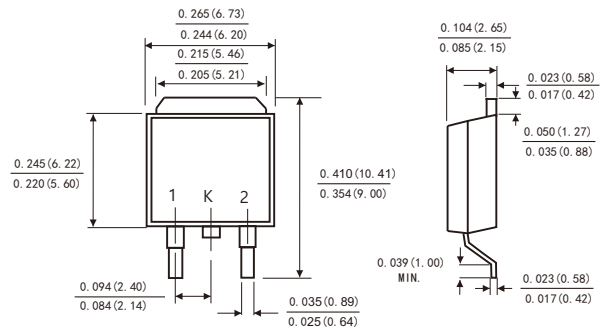
### ITO-220AB



### TO-263

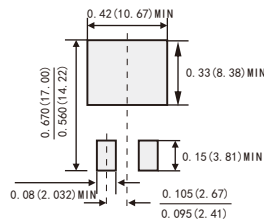


### TO-252



### Suggested Pad Layout

(TO-263)



### Suggested Pad Layout

(TO-252)

