

Features

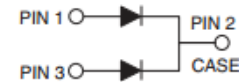
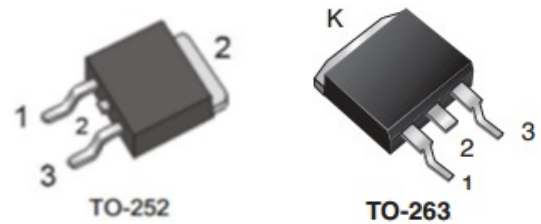
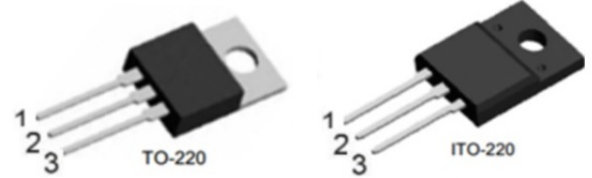
- ◇ Trench Schottky Barrier technology
- ◇ Ultra low forward voltage drop
- ◇ Low power loss,high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ High current capability
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.

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}	60	V	
Maximum RMS voltage	V_{RWS}	42	V	
Maximum DC blocking voltage	V_{DC}	60	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^2s	
Typical Thermal Resistance	TO-220AB	$R_{\theta JA}$	11.4	$^{\circ}C/W$
		$R_{\theta JC}$	2.7	$^{\circ}C/W$
		$R_{\theta JL}$	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	680	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	100	-	-	V	
Instantaneous forward voltage	IF=10A per Ige	TA= 25°C	VF	-	0.58	0.62	V
		TA= 100°C	VF	-	0.55	0.61	V
		TA= 125°C	VF	-	0.54	0.60	V
	IF=5A per Ige	TA= 25°C	VF	-	0.49	-	V
		TA= 100°C	VF	-	0.43	-	V
		TA= 125°C	VF	-	0.41	-	V
	IF=3A per Ige	TA= 25°C	VF	-	0.46	-	V
		TA= 100°C	VF	-	0.42	-	V
		TA= 125°C	VF	-	0.40	-	V
Maximum DC reverse current @Rated DC Blocking Vlotage	TA= 25°C	IR	-	10.0	50	μ A	
	TA=125°C	IR	-	-	20000	μ A	

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)
MBR2060LCT	TO-220	50pcs/Tube	558×148×38	1000	565×225×170	5000
MBRF2060LCT	ITO-220	50pcs/Tube	558×148×38	1000	565×225×170	5000
MBR2060LDT	TO-252	50pcs/Tube	558×148×38	1000	565×225×170	5000
MBR2060LMT	TO-263	50pcs/Tube	558×148×38	4000	565×225×170	20000



RATING AND CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

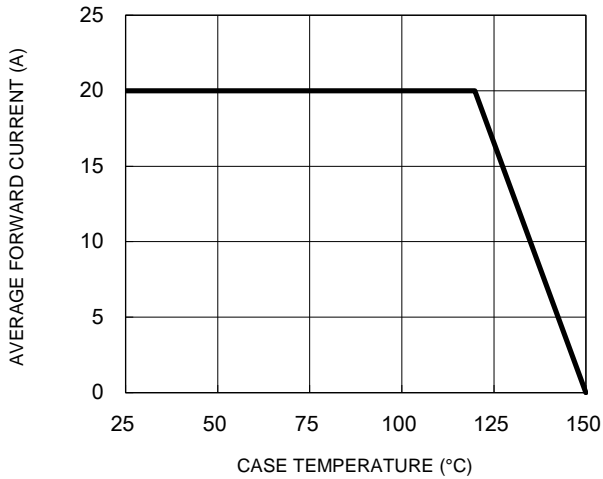


Fig.2 Typical Junction Capacitance

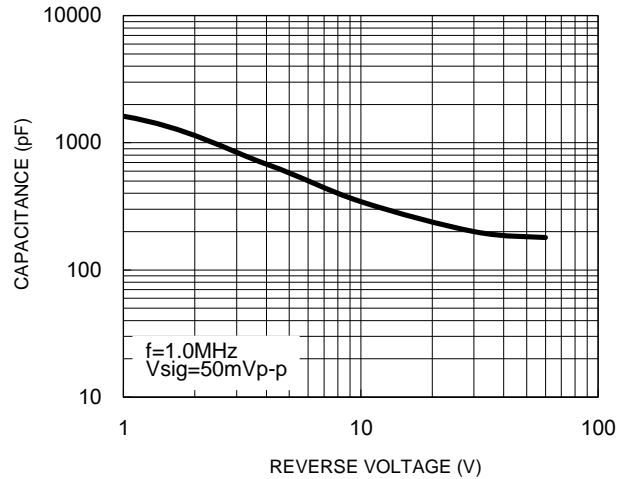


Fig.3 Typical Reverse Characteristics

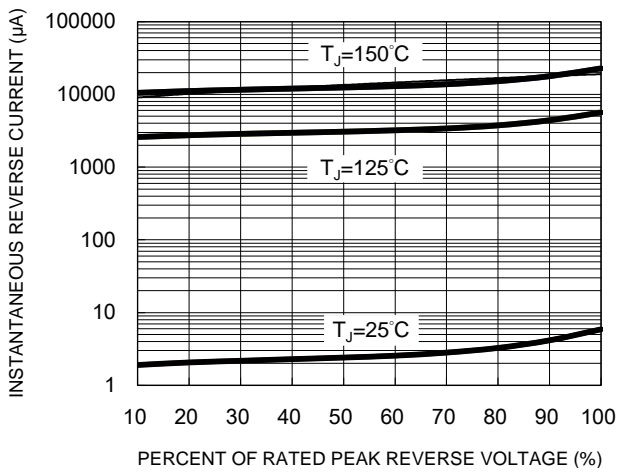


Fig.4 Typical Forward Characteristics

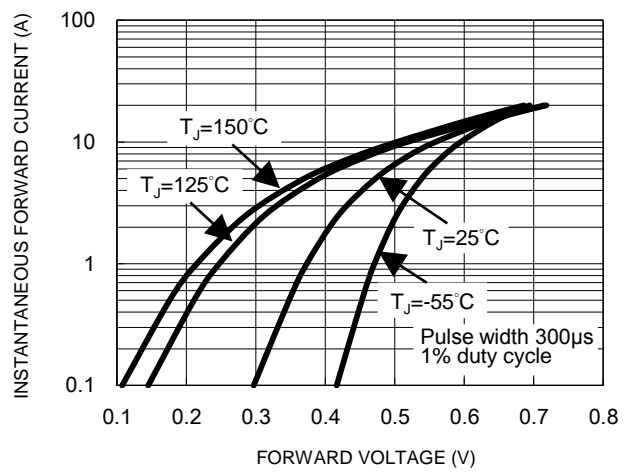
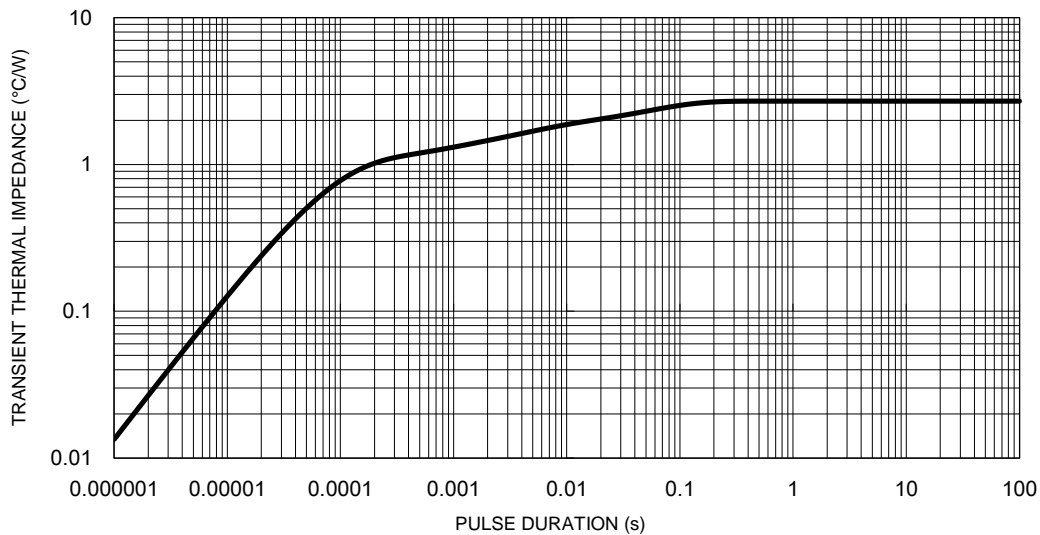


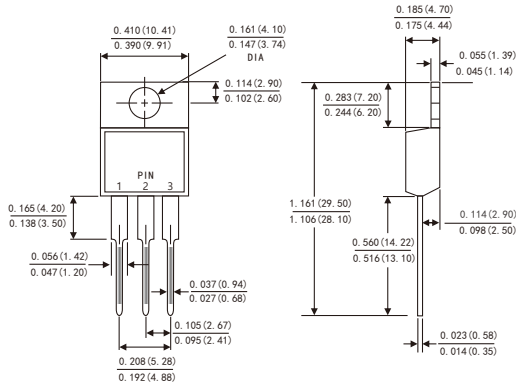
Fig.5 Typical Transient Thermal Impedance



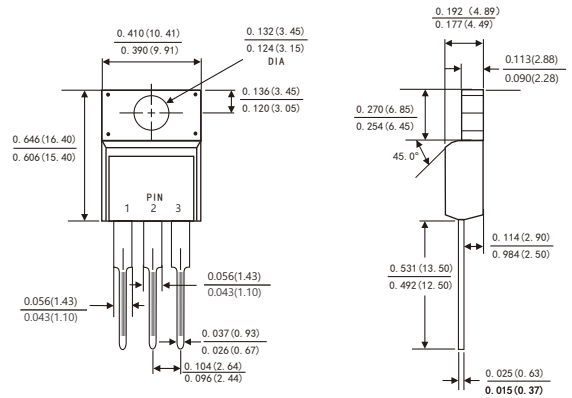
PACKAGE OUTLINE DIMENSIONS

Dimensions in inches and (millimeters)

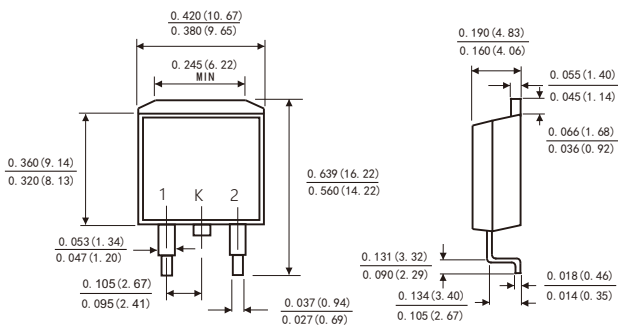
TO-220AB



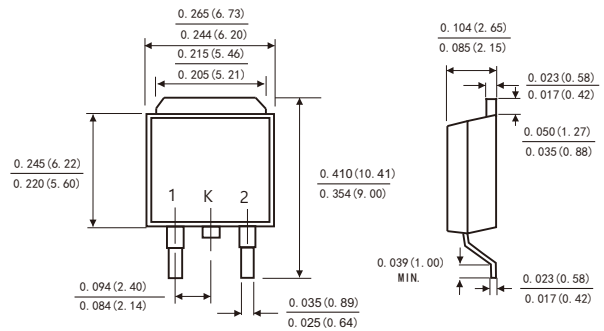
ITO-220AB



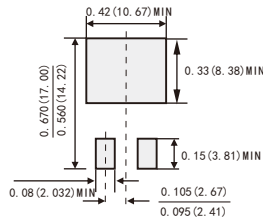
TO-263



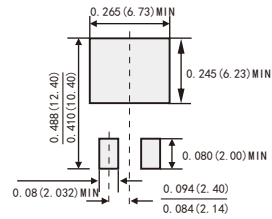
TO-252



Suggested Pad Layout (TO-263)



Suggested Pad Layout (TO-252)



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