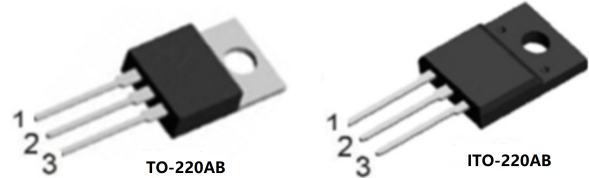


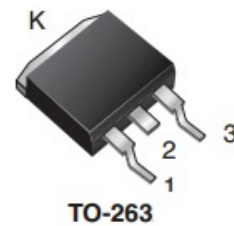
Features

- ◇ 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.



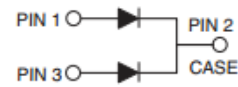
Applications

- ◇ Switching diode
- ◇ Switching mode power supply(SMPS)
- ◇ DC/DC converter
- ◇ LED lighting
- ◇ AC-DC Power 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}	250	V
Maximum RMS voltage	V_{RWS}	175	V
Maximum DC blocking voltage	V_{DC}	250	V
Maximum average forward rectified current	$I_{F(AV)}$	40	A
per device		20	A
per diode			
Peak forward surge current 8.3ms half-sine-wave	I_{FSM}	310	A
I^2t Rating for Fusing($t < 8.3ms$)	I^2t	398.815	A ² s
Typical Thermal Resistance	TO-220AB	$R_{\theta JA}$	13.6 °C/W
		$R_{\theta JC}$	2.0 °C/W
		$R_{\theta JL}$	3.4 °C/W
	ITO-220AB	$R_{\theta JC}$	0.81 °C/W
		$R_{\theta JA}$	60 °C/W
	TO-263	$R_{\theta JC}$	2.0 °C/W
Typical junction capacitance: VR=4.0v,f=1MHz	C_J	370	pF
Junction temperature	T_J	150	°C
Storage temperature range	T_{STG}	-40~150	°C



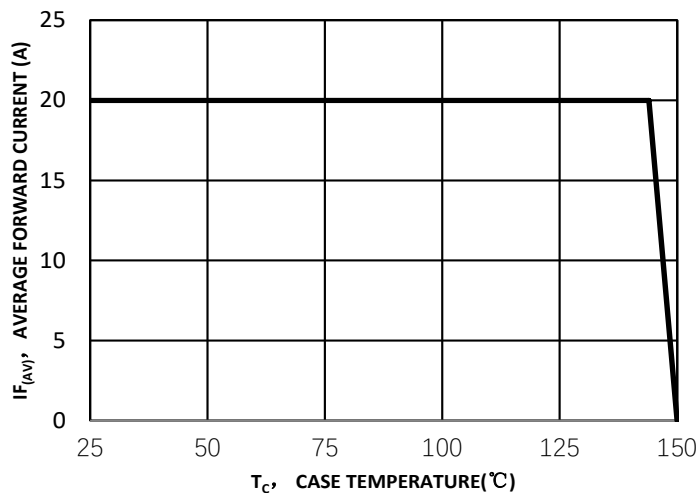
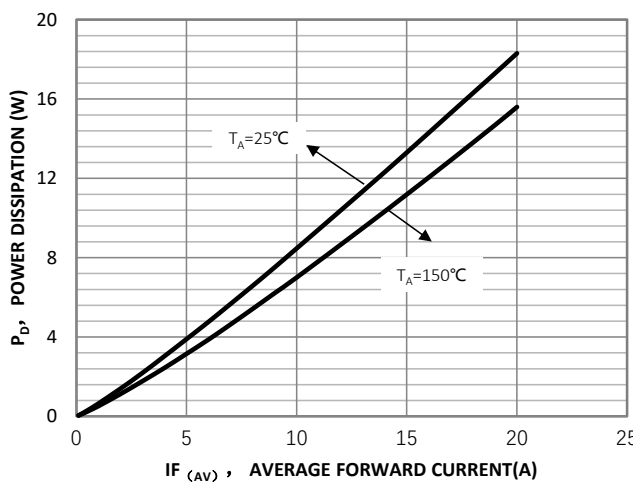
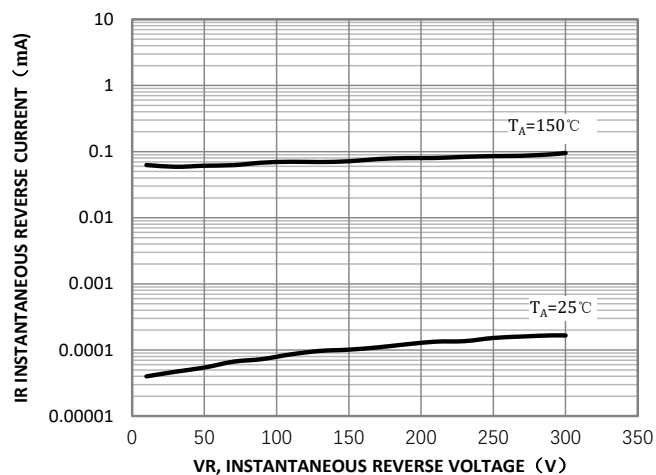
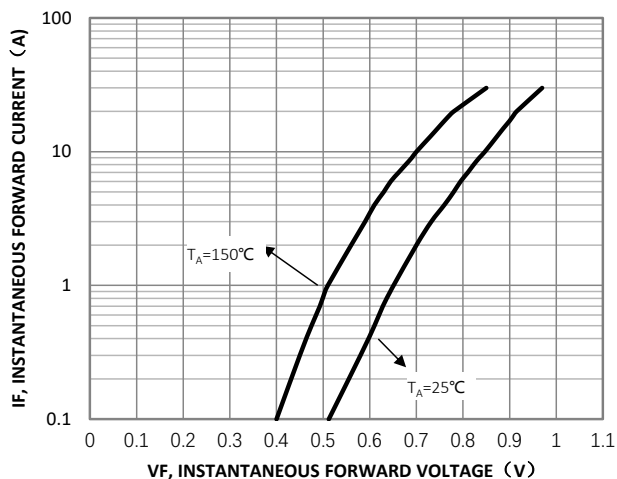
Electrical Characteristics

PARAMETER	TEST CONDITIONS		SYMBOL	VALUE			UNITS
				Min	Typ	Max	
Breakdown voltage per diode(min)	IR=0.2mA		V _{BR}	250	-	-	V
Instantaneous forward voltage	IF=3.0A	T _J = 25℃	V _F	-	0.73	0.83	V
		T _J = 150℃	V _F	-	0.58	0.65	V
	IF=20A	T _J = 25℃	V _F		0.91	0.97	V
		T _J = 150℃	V _F		0.78	0.85	V
Maximum DC reverse current	T _J = 25℃		I _R	-	-	3	μ A
@Rated DC Blocking Vlotage	T _J =150℃		I _R	-	-	1	mA
Reverse Recovery Time	VR=30V,IF=0.5A,di/ dt=100A/ μ S,T _J =25℃		T _{rr}	-	27	-	Ns
Reverse Recovery Charge			Q _{rr}	-	25	-	μ C

ORDERING PACK INFORMATION

Part No.	Packge	Packing	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
MBR40250CT	TO-220AB	50pcs/Tube	558×148×38	1000	570×290×180	5000
MBRF40250CT	ITO-220AB	50pcs/Tube	558×148×38	1000	570×290×180	5000
MBRB40250CT	TO-263	50pcs/Tube	560×178×38	1000	585×385×220	10000
MBRB40250CT	TO-263	800pcs/Reel	335×335×40	800	370×385×220	4800

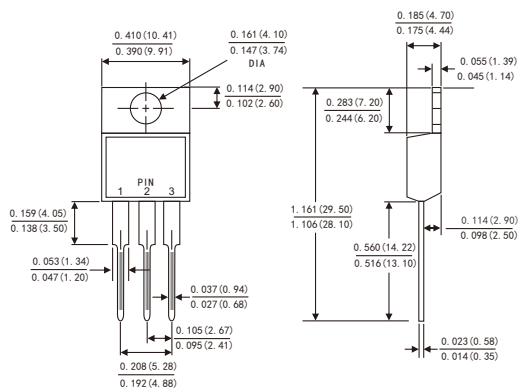
Ratings And Characteristics Curves (Per Leg)



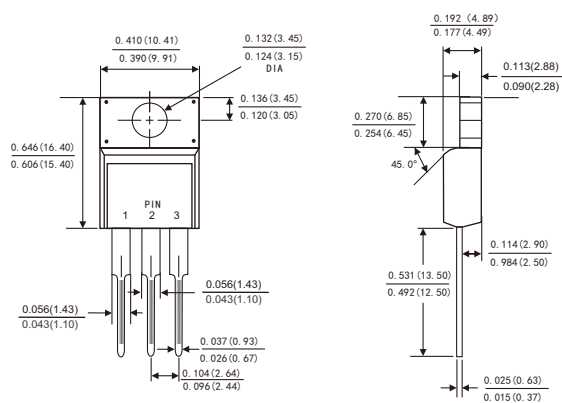
Package Outline Dimensions

Dimensions in inches and (millimeters)

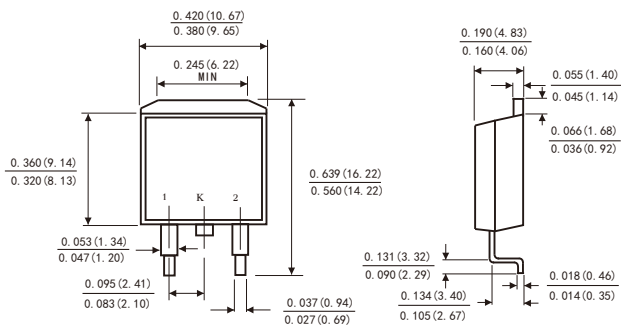
TO-220AB



ITO-220AB



TO-263



Suggested Pad Layout

