



Reverse Voltage: 250Volts

Forward Current:20.0Amperes

Features

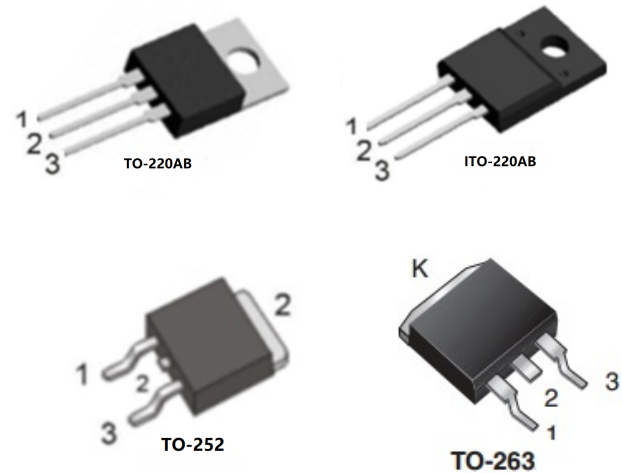
- ◇ Guarding for over voltage protection
- ◇ Low forward voltage drop
- ◇ Low power loss,high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ High current capability
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.

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 ClassificationRating 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}	250	V
Maximum RMS voltage		V_{RWS}	175	V
Maximum DC blocking voltage		V_{DC}	250	V
Maximum average forward rectified current	per device	$I_{F(AV)}$	20	A
	Per diode		10	
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 ² s
Typical Thermal Resistance	TO-220AB	$R_{\theta JA}$	13.6	°C/W
		$R_{\theta JC}$	3.2	°C/W
		$R_{\theta JL}$	3.4	°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: $V_R=4.0v, f=1MHz$		CJ	680	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=0.2mA		VB _R	200	-	-	V
Instantaneous forward voltage	IF=10A per leg	TA= 25℃	VF	-	0.86	0.95	V
		TA= 125℃	VF	-	0.72	-	V
	IF=5A per leg	TA= 25℃	VF	-	0.80	-	V
		TA= 125℃	VF	-	0.68	-	V
	IF=3A per leg	TA= 25℃	VF	-	0.76	-	V
		TA= 125℃	VF	-	0.63	-	V
Maximum DC reverse current @Rated DC Blocking Vlotage	T _A = 25℃		IR	-	1	10	μ A
	T _A =125℃		IR	-	1000	20000	μ A

ORDERING PACK INFORMATION

Part No.	Packge	Pcking	Quatity(pcs/box)	Quatity(pcs/carton)
MBR20250CT	TO-220	50pcs/Tube	1000	5000
MBRF20250CT	ITO-220	50pcs/Tube	1000	5000
MBRD20250CT	TO-252	80pcs/Tube	4000	40000
MBRD20250CT	TO-252	2500pcs/Reel	2500	12500/25000
MBRB20250CT	TO-263	50pcs/Tube	1000	5000/10000
MBRB20250CT	TO-263	800pcs/Reel	800	4000/8000

RATINGS AND CHARACTERISTICS CURVES



FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

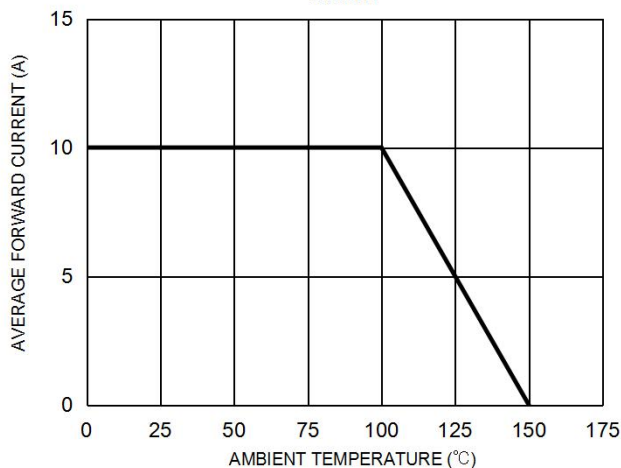


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

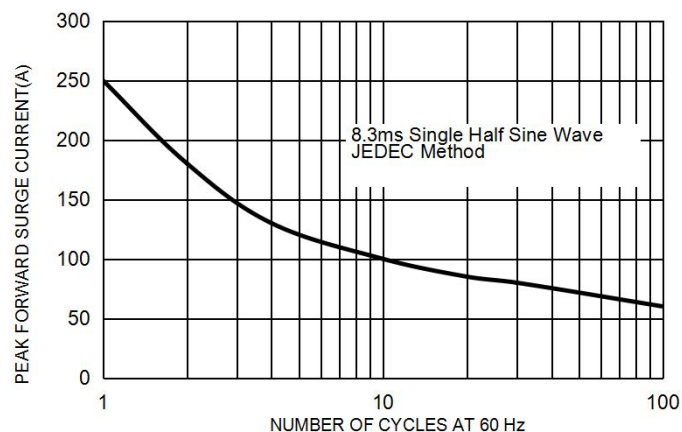


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

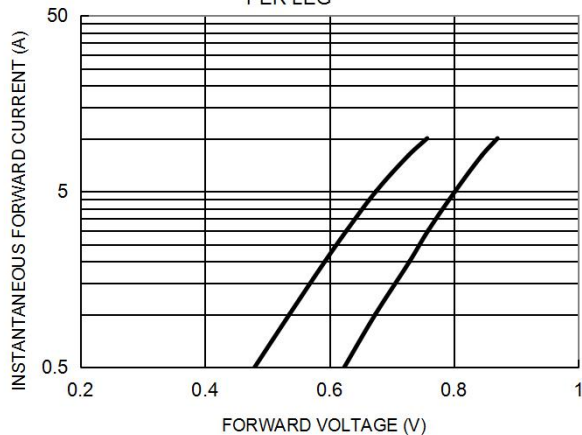
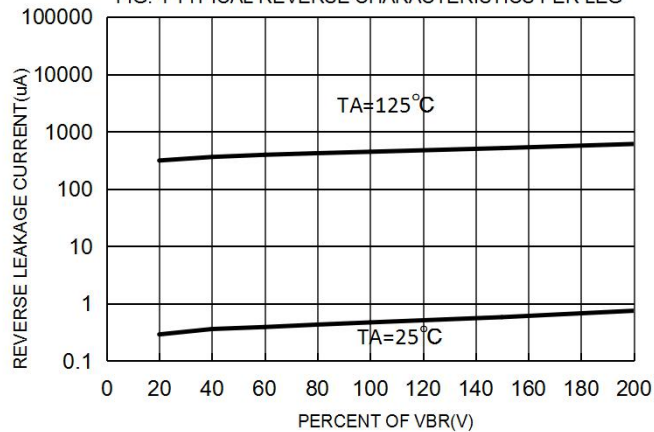


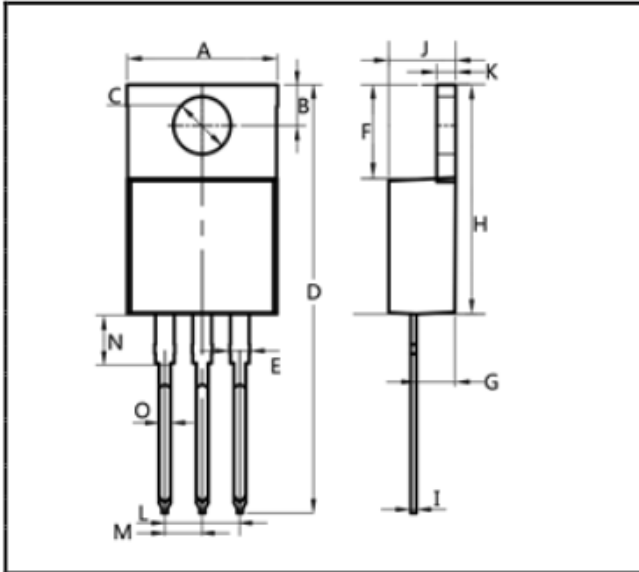
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



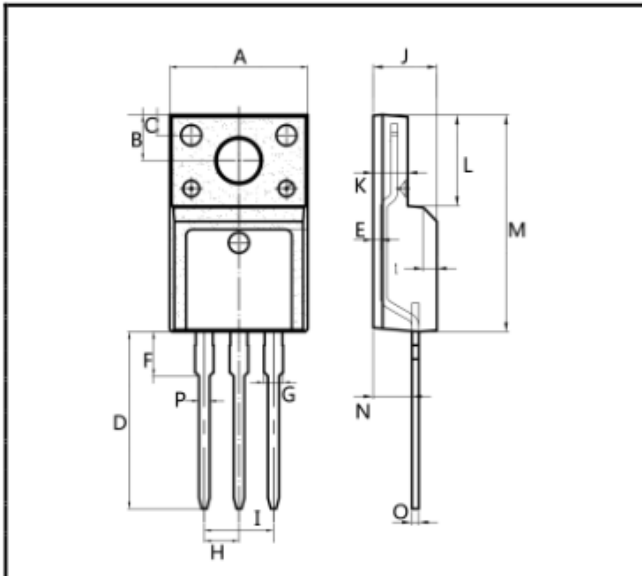


PACKAGE OUTLINE DIMENSIONS

TO-220AB

	Dim.	Min.	Max.
	A	10.15	10.35
	B	2.65	2.95
	C	3.70	3.90
	D	28.5	29.5
	E	1.30	1.45
	F	6.35	6.55
	G	2.9	3.3
	H	15.0	16.0
	I	0.38	0.42
	J	4.45	4.55
	K	1.25	1.35
	L	Typ 5.08	
	M	Typ 2.54	
	N	3.1	3.3
	O	0.76	0.84
All Dimensions in millimeter			

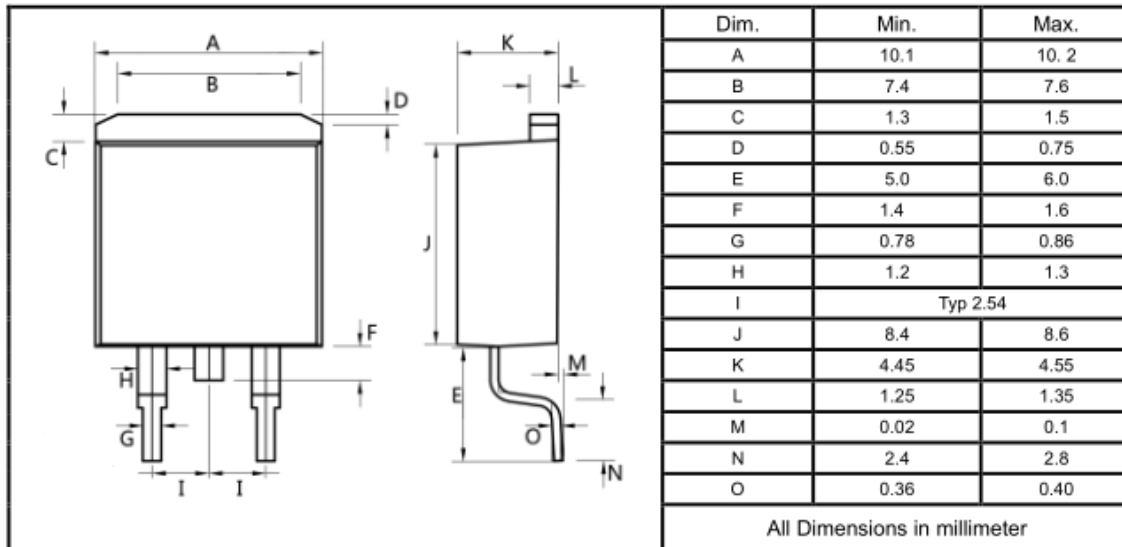
TO-220F

	Dim.	Min.	Max.
	A	9.95	10.25
	B	2.95	3.25
	C	1.25	1.45
	D	12.95	13.25
	E	0.50	0.65
	F	3.1	3.3
	G	1.30	1.45
	H	Typ 2.54	
	I	Typ 5.08	
	J	4.60	4.75
	K	2.50	2.65
	L	6.35	6.55
	M	15.4	16.0
	N	2.75	3.05
	O	0.48	0.52
	P	0.76	0.84
All Dimensions in millimeter			



PACKAGE OUTLINE DIMENSIONS

TO-263



TO-252

