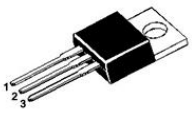
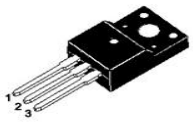
MBRx20200CT Series

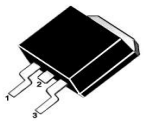
SCHOTTKY BARRIER RECTIFIER



TO-220AB/MBR20200CT

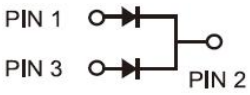


TO-220F/ MBRF20200CT



TO-263/ MBRB20200CT

TO-252/MBRD20200CT



FEATURES

- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses，High efficiency
- Guarding for over voltage protection

RoHS COMPLIANT HALOGEN FREE

APPLICATIONS

Low VF Schottky barrier rectifier are designed for high freqency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

Primary Characteristic

I_O	2*10A
V_{RRM}	200V
I_{FSM}	250A
V_F	0.76V
$T_J$max	150℃
Assembly code	AH

MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275℃ maximum,10s per JESD 22-B106

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

Characteristics		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	200	V
Working Peak Reverse Voltage		V_{RWM}	200	V
Maximum DC Blocking Voltage		V_{DC}	200	V
Maximum Average Forward Rectified Current	Per Leg	I_O	10	A
	Total		20	
Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	250	A
Operating Temperature Range		T_J	150	°C
Storage Temperature Range		T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note1) TO-220AB,TO-263,TO-252 TO-220F		$R_{\theta JC}$	 2 4	°C/W

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbol	Value		Unit
Forward Voltage Drop(Note2)		V_F	Typ.	Max.	V
at I_F=3A	TA=25°C		0.76	-	
	TA=125°C		0.63	-	
at I_F=5A	TA=25°C		0.80	-	
	TA=125°C		0.68	-	
at I_F=10A	TA=25°C		0.87	0.92	
	TA=125°C		0.76	-	
Maximum Reverse Current at V_R=200V	TA=25°C	I_R	1	10	μA
	TA=125°C		1	-	mA

Note2:Pulse test: 300 μs pulse width, 1 % duty cycle

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

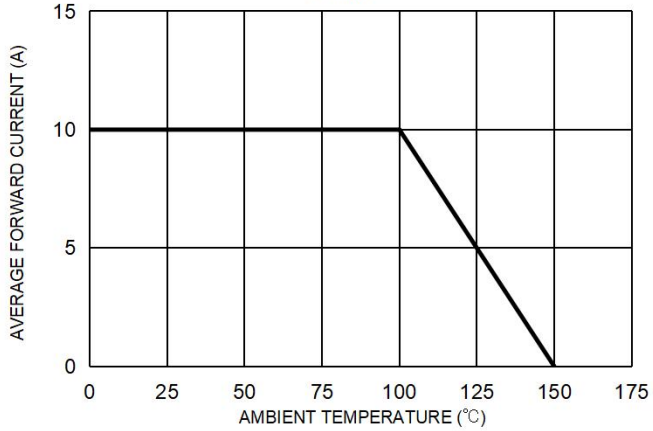


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

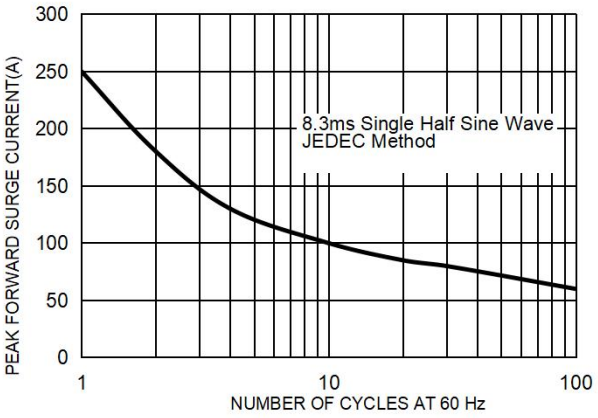


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

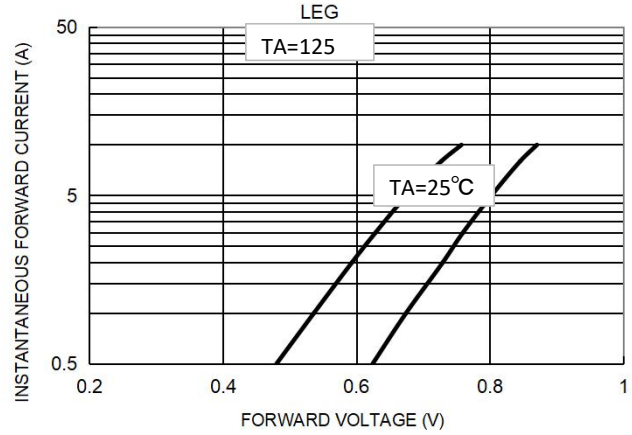
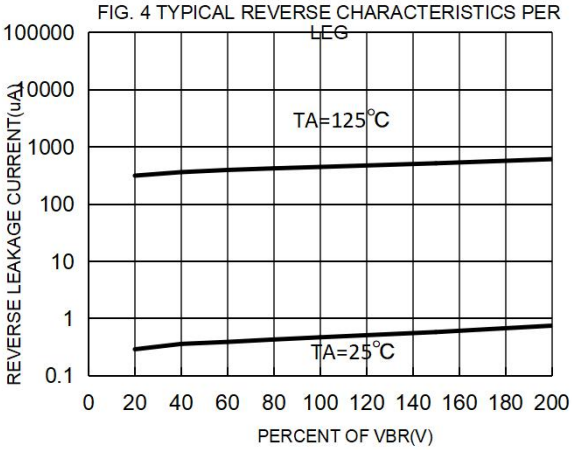
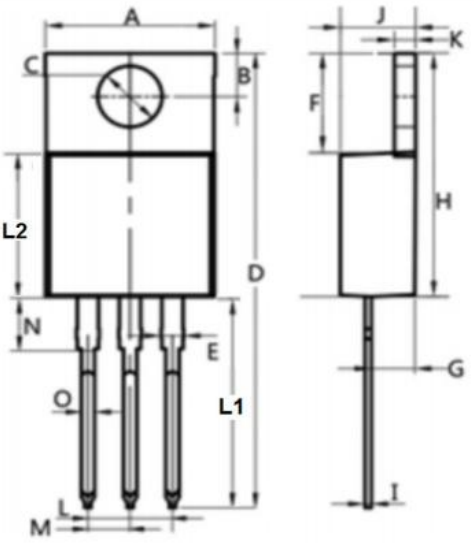


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

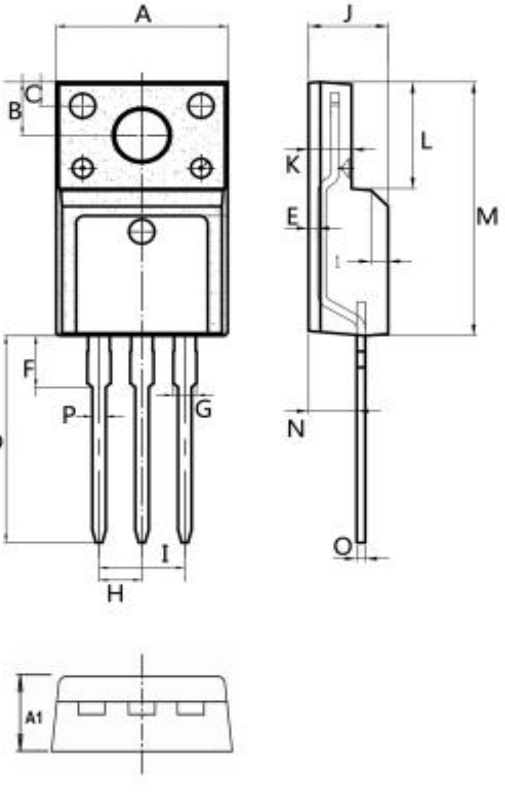


TO-220AB



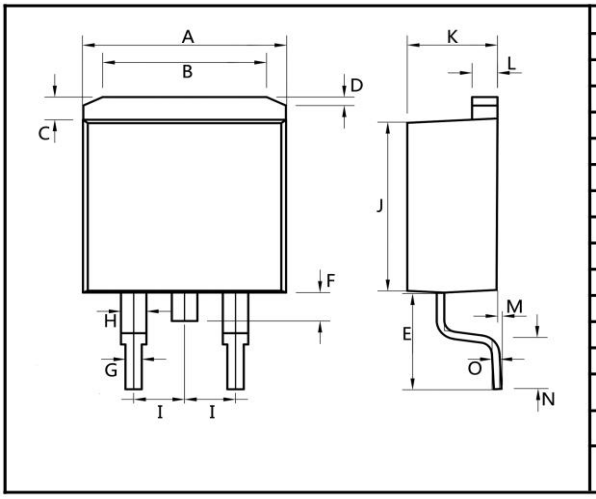
Dim.	Min.	Max.
A	10.15	10.35
B	2.50	2.95
C	3.70	3.90
D	28.5	29.5
E	1.20	1.40
F	6.20	6.55
G	2.4	2.6
H	15.0	16.0
I	0.35	0.42
J	4.3	4.55
K	1.25	1.35
L	Typ5.08	
L1	13	14
L2	8.5	9.5
M	Typ2.54	
N	2.8	3.5
O	0.70	0.90
All Dimensions in millimeter		

TO-220F



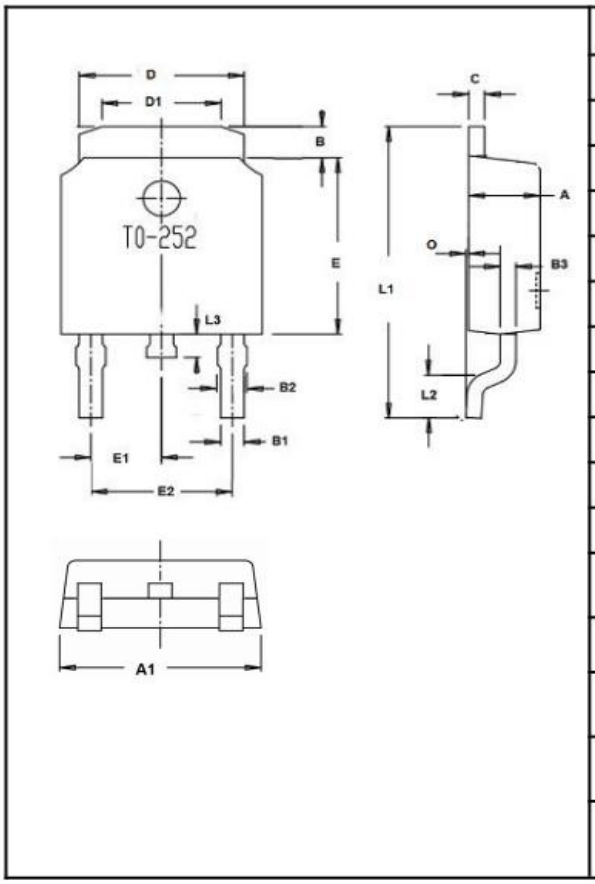
Dim.	Min.	Max.
A	9.95	10.25
A1	4.5	5.0
B	2.95	3.25
C	1.25	1.45
D	12.80	13.20
E	0.40	0.60
F	2.8	3.5
G	1.30	1.45
H	Typ 2.54	
I	Typ 5.08	
J	4.60	4.75
K	2.45	2. 65
L	6.5	6.8
M	15.4	16.0
N	2.75	3.05
O	0.45	0.55
P	0.70	0.90
All Dimensions in millimeter		

TO-263



Dim.	Min.	Max.
A	10.15	10.35
B	6	8
C	1.2	1.5
D	0.55	1.0
E	4.3	5.3
F	1.4	1.6
G	0.75	0.85
H	1.2	1.5
I	Typ2.54	
J	8.5	9.5
K	4.3	4.55
L	1.25	1.35
M	0.02	0.23
N	2.2	2.8
O	0.30	0.40
All Dimensions in millimeter		

TO-252



Dim.	Min.	Max.
A	2.1	2.5
A1	6.3	6.9
B	0.96	1.42
B1	0.74	0.86
B2	0.74	0.94
C	Typ0.5	
D	5.33	5.53
D1	3.65	4.05
E	6.0	6.2
E1	Typ2.29	
E2	Typ4.58	
O	0	0.15
L1	9.9	10.5
L2	Typ1.65	
L3	0.6	1.0
All Dimensions in millimeter		