

Schottky Barrier Rectifiers

MBR10100CT MBRF10100CT MBRB10100CT MBRI10100CT MBRD10100CT

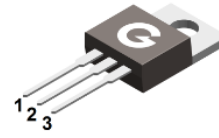
Features

- Low power loss, high efficiency
- High surge capability
- Guardring for overvoltage protection
- Metal silicon junction, majority carrier conduction
- RoHS compliant with Halogen-free

HF

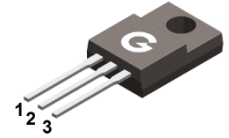
Mechanical Data

- Case: TO-220AB, ITO-220AB, TO-263, TO-251, TO-252
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



MBR10100CT

TO-220AB



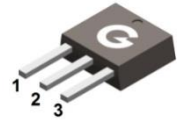
MBRF10100CT

ITO-220AB



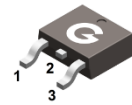
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TO-263



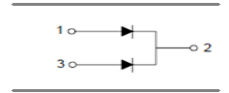
MBRI10100CT

TO-251



MBRD10100CT

TO-252



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MBR10100CT	TO-220AB	50 pcs / Tube	MBR10100CT
MBRF10100CT	ITO-220AB	50 pcs / Tube	MBRF10100CT
MBRB10100CT	TO-263	50 pcs / Tube or 800 pcs / Tape & Reel	MBRB10100CT
MBRI10100CT	TO-251	80 pcs / Tube	MBRI10100CT
MBRD10100CT	TO-252	80 pcs / Tube & 2500 pcs / Tape & Reel	MBRD10100CT

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	100	V
RMS Reverse Voltage	V _{RMS}	70	V
DC Blocking Voltage	V _{DC}	100	V
Continuous Forward Current (per leg)	I _F	5	A
Continuous Forward Current (per device)	I _F	10	A
Peak Forward Surge Current (8.3ms single half sine-wave, per leg)	I _{FSM}	120	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Case (TO-220AB, per leg)	R _{θJC}	2	°C/W
Thermal Resistance Junction-to-Case (ITO-220AB, per leg)		4	°C/W
Thermal Resistance Junction-to-Case (TO-263, per leg)		3	°C/W
Thermal Resistance Junction-to-Case (TO-251, TO-252, per leg)		6	°C/W
Operating Junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V _{BR}	I _R = 100μA	100	-	-	V
Forward Voltage	V _F	I _F = 5A, T _J = 25°C, per leg	-	-	0.85	V
		I _F = 5A, T _J = 125°C, per leg	-	0.65	0.75	V
Maximum Peak Reverse Current	I _R	V _R = Rated V _{RRM} , T _J = 25°C	-	-	0.1	mA
		V _R = Rated V _{RRM} , T _J = 125°C	-	0.6	5	mA

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

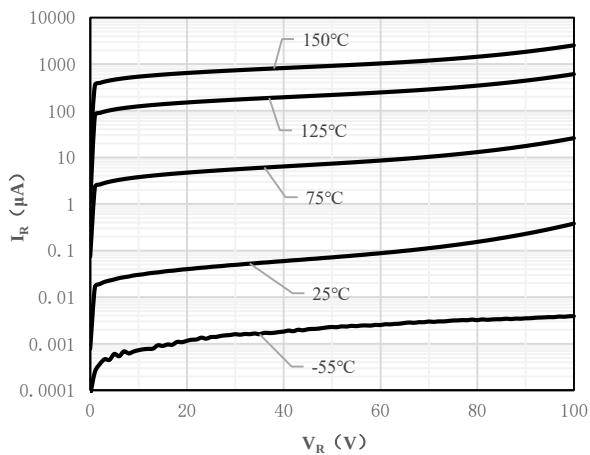


Fig 1 Typical Reverse Characteristic

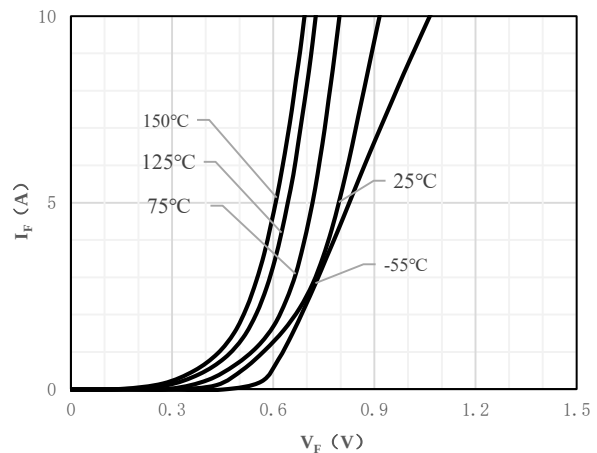


Fig 2 Typical Forward Characteristic

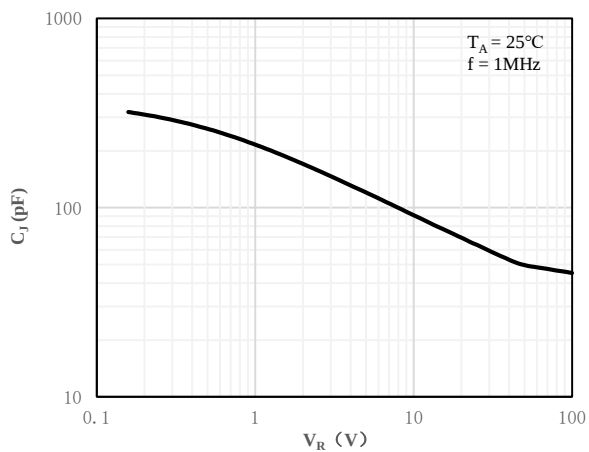


Fig 3 Capacitance vs. Reverse Voltage

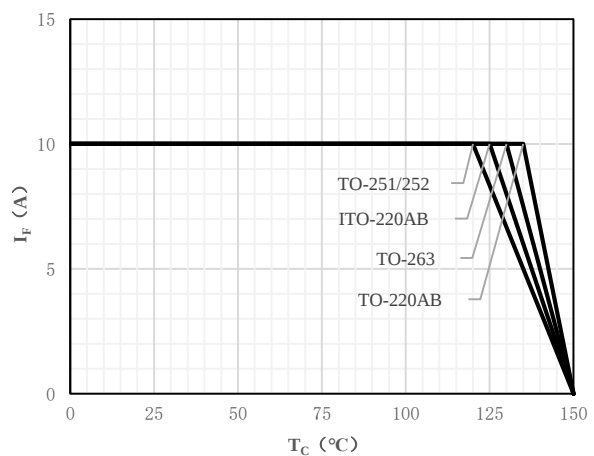
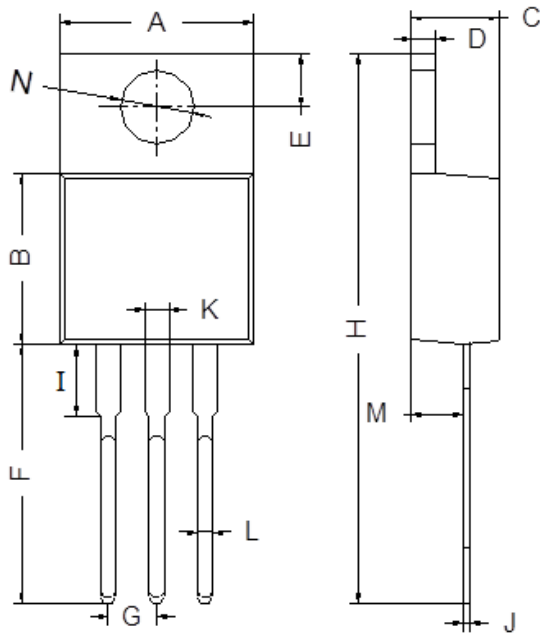
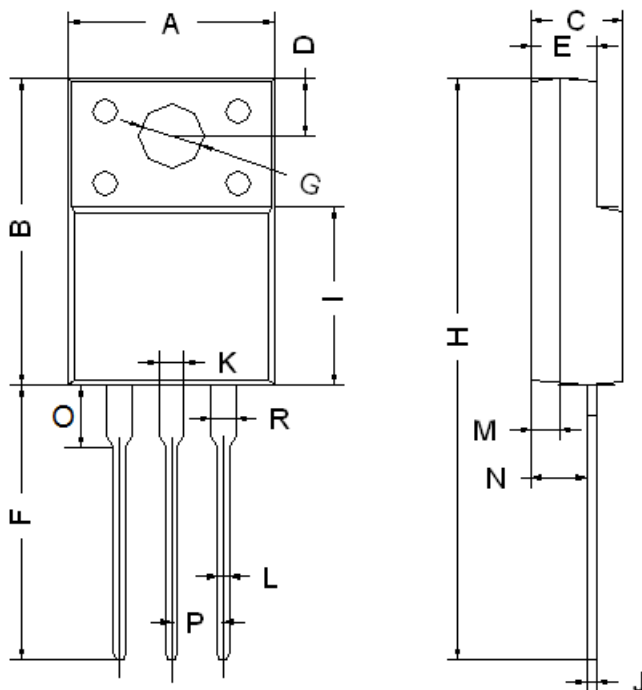


Fig 4 Forward Derating Curve

Package Outline Dimensions (Unit: mm)

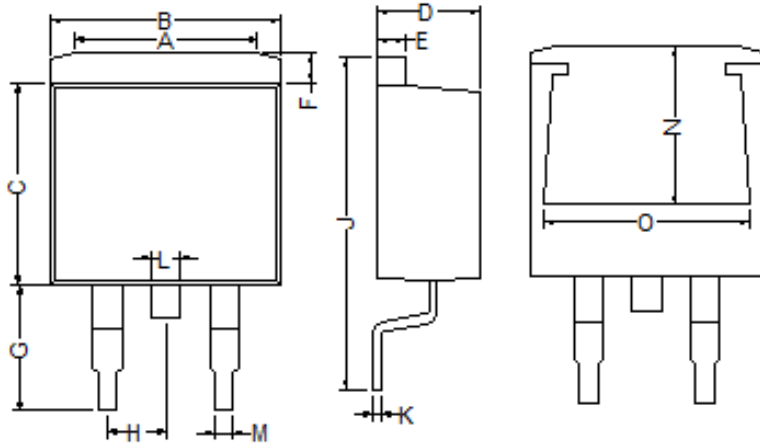


TO-220AB		
Dimension	Min.	Max.
A	9.80	10.30
B	8.70	9.10
C	4.37	4.77
D	1.07	1.47
E	2.64	2.84
F	13.14	13.74
G	2.44	2.64
H	28.03	28.83
I	3.50	4.00
J	0.28	0.48
K	1.22	1.32
L	0.71	0.91
M	2.40	2.60
N	3.76	3.96

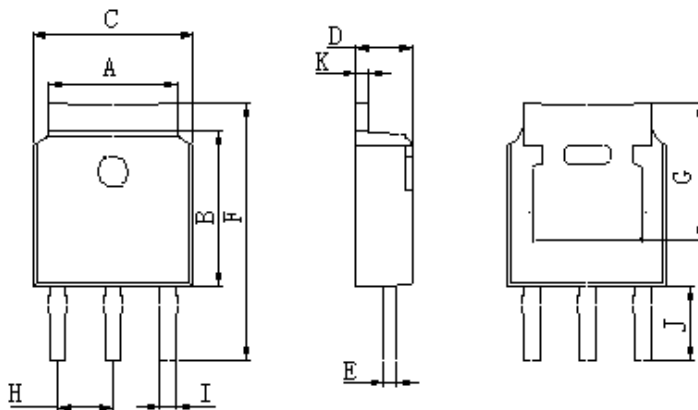


ITO-220AB		
Dimension	Min.	Max.
A	9.90	10.30
B	14.80	15.20
C	4.30	4.70
D	2.50	2.90
E	2.80	3.30
F	13.00	13.60
G	3.10	3.30
H	28.00	28.60
I	7.90	8.90
J	0.40	0.60
L	0.70	0.90
M	1.30	1.50
N	2.60	2.80
O	2.60	3.10
P	2.45	2.65
K/R	1.10	1.30

MBR10100CT MBRF10100CT MBRB10100CT
MBRI10100CT MBRD10100CT

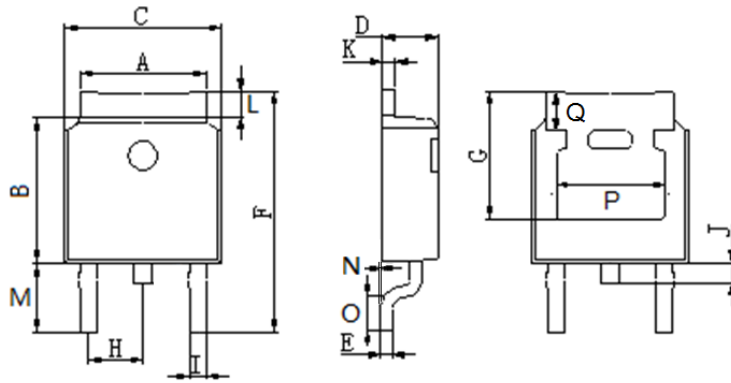


TO-263		
Dimension	Min.	Max.
A	6.00	8.00
B	9.90	10.30
C	8.50	9.10
D	4.37	4.77
E	1.07	1.47
F	1.07	1.47
G	5.05	5.74
H	2.44	2.66
J	15.15	15.80
K	0.28	0.48
L	1.17	1.37
M	0.71	0.91
N	6.55	7.68
O	7.70	8.10



TO-251		
Dimension	Min.	Max.
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	11.00	11.60
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	4.00	4.40
K	0.40	0.60

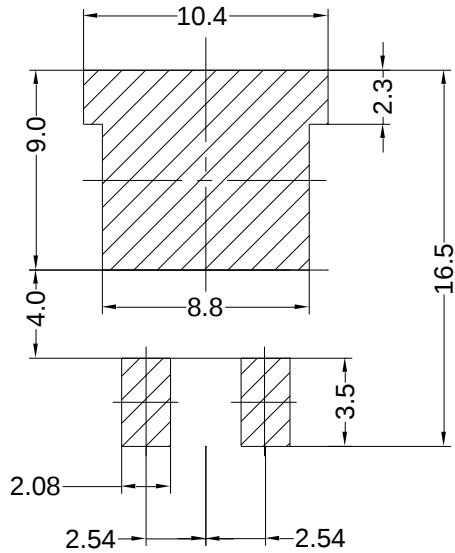
MBR10100CT MBRF10100CT MBRB10100CT
MBRI10100CT MBRD10100CT



TO-252		
Dimension	Min.	Max.
A	5.05	5.65
B	5.80	6.40
C	6.25	6.85
D	2.20	2.40
E	0.40	0.60
F	9.71	10.31
G	5.05	5.65
H	2.10	2.50
I	0.70	0.90
J	0.50	0.70
K	0.40	0.60
L	0.80	1.20
M	2.70	3.10
N	0.00	0.12
O	1.30	1.70
P	4.70	4.90
Q	1.25	1.45

Mounting Pad Layout (Unit: mm)

TO-263



TO-252

