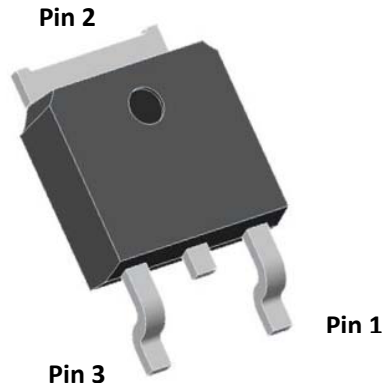


Schottky Diodes



Features

- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-252
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRL20150CD
Device marking code			MBRL20150CD
Repetitive Peak Reverse Voltage	V_{RRM}	V	150
Average Rectified Output Current @60Hz sine wave, R-load, Tc (FIG.1)	I_o	A	20
Surge(Non-repetitive)Forward Current @8.3ms half sine-wave, 1 cycle, Ta=25°C	I_{FSM}	A	150
Surge(Non-repetitive)Forward Current @1ms, square wave, 1 time, Ta=25°C			300
Current Squared Time @1ms≤t≤8.3ms Tj=25°C, rating of per diode	I^2t	A ² s	93
Storage Temperature	Tstg	°C	-55 ~ +175
Junction Temperature	Tj	°C	-55 ~ +175

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V_{FM}	V	$I_{FM}=10.0A$ $T_a=25^\circ C$	-	0.81	0.85
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	mA	$V_{RM}=V_{RRM}$ $T_a=25^\circ C$	-	-	0.1
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_a=125^\circ C$	-	-	20

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



MBRL20150CD

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBRL20150CD
Thermal Resistance	Between junction and ambient	R _{θJ-A}	°C/W	50.0
	Between junction and case	R _{θJ-C}		5.0

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

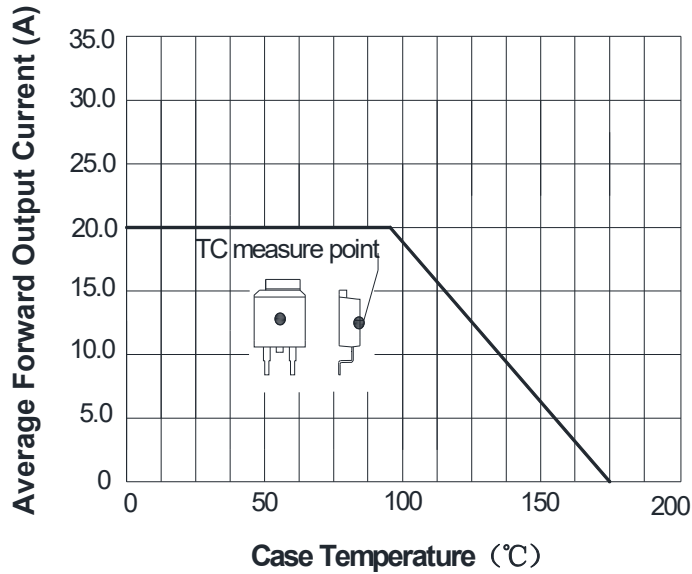


FIG2: Surge Forward Current Capability

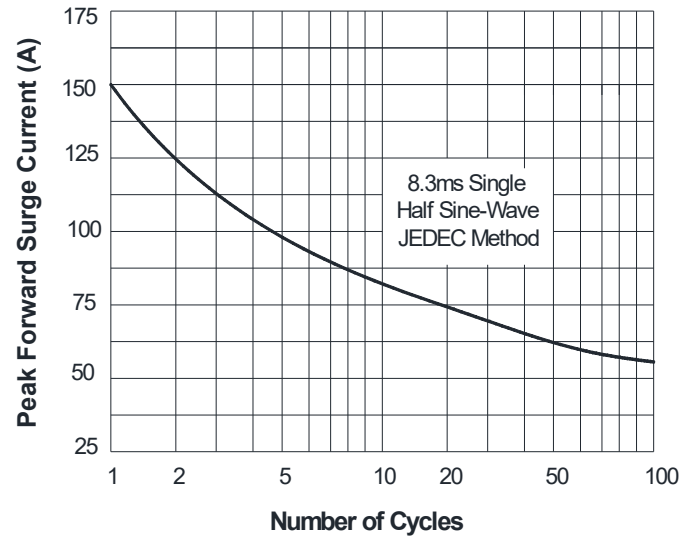


FIG3: Forward Voltage

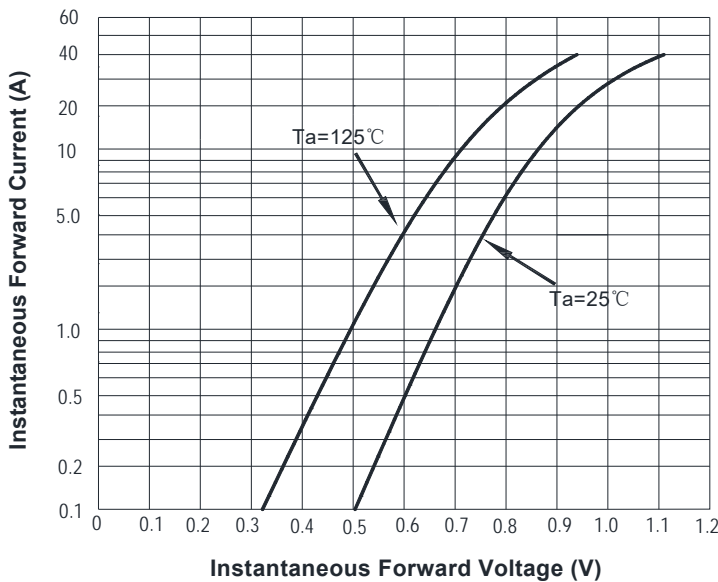
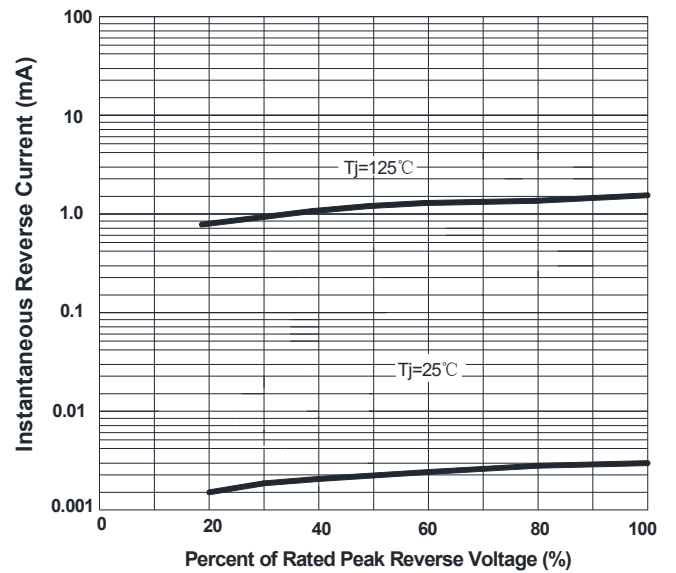


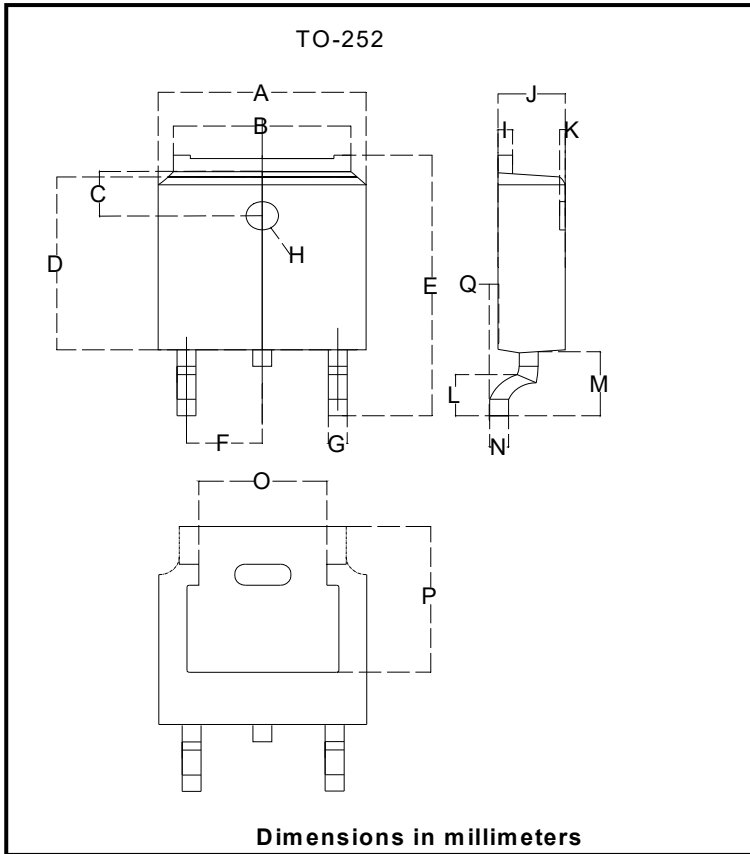
FIG4: Instantaneous Reverse Characteristics





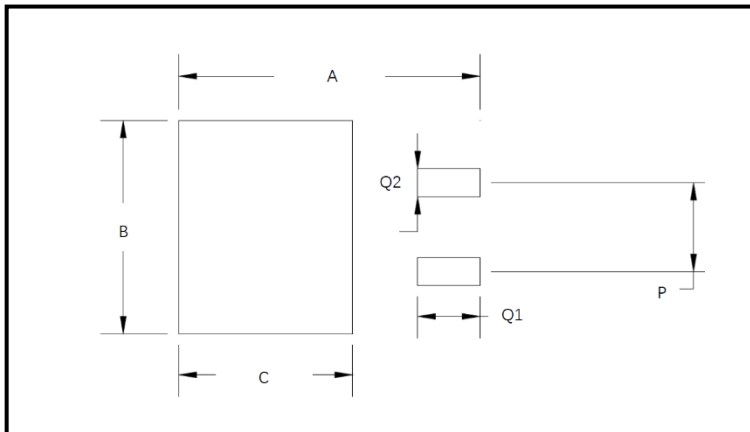
MBRL20150CD

■ Outline Dimensions



TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ 1.050	Φ 1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
O	4.20	4.95
P	5.15	5.45
Q	0	0.2

■ Suggested Pad Layout



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52



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