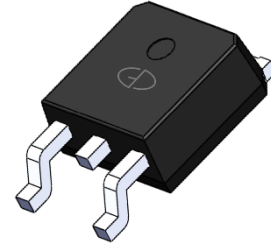


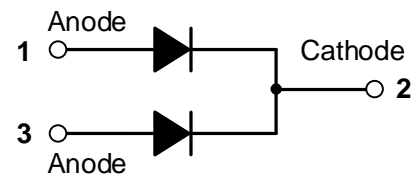
## 20A,150V Schottky Barrier Rectifier

### Features

- Low forward voltage, low power loss
- Guarding for over voltage protection
- Low leakage current
- High surge current
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



TO-252 (D-PAK)



### Applications

- SMPS
- Adapter
- Server Power

### Mechanical Data

- Case: Epoxy, Molded
- Weight: 0.4grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 2500 units per reel

### Maximum Ratings & Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	MBRD20150CT	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	150	V
Maximum RMS voltage	V <sub>RMS</sub>	105	V
Maximum DC blocking voltage	V <sub>DC</sub>	150	V
Maximum average forward	I <sub>F(AV)</sub>	20	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150	A
Operating junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

Electrical Specifications (T <sub>A</sub> =25°C unless otherwise noted)					
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward Drop Voltage (Note1)	V <sub>F</sub>	I <sub>F</sub> =10A, T <sub>J</sub> =25°C	-	0.92	V
		I <sub>F</sub> =10A, T <sub>J</sub> =125°C	-	0.82	
		I <sub>F</sub> =20A, T <sub>J</sub> =25°C	-	-	
		I <sub>F</sub> =20A, T <sub>J</sub> =125°C	-	-	
Reverse leakage current @V <sub>R</sub> (Note2)	I <sub>R</sub>	T <sub>J</sub> =25°C	-	50	uA
		T <sub>J</sub> =100°C	-	5	mA

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	4.0	°C /W
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	62.5	°C /W

Note:

1. Pulse test with PW=0.3ms, duty cycle=2%
2. Pulse test with PW=30ms

## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

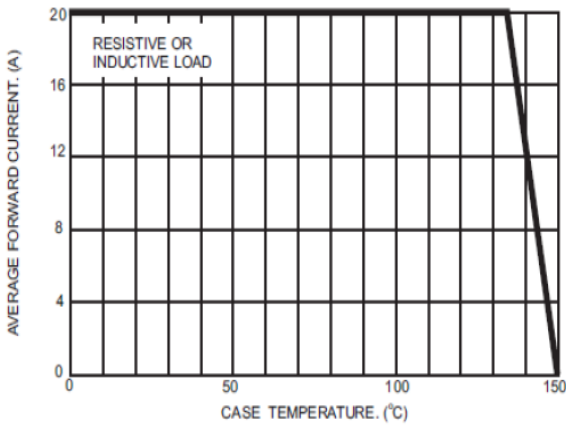


Fig.1 – Forward Current Derating Curve

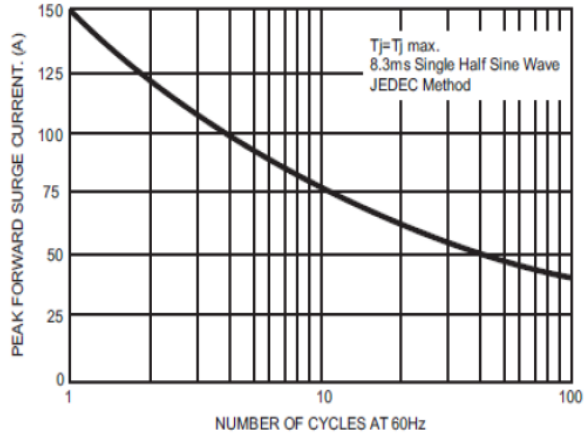


Fig.2 – Maximum Non-Repetitive Surge Current

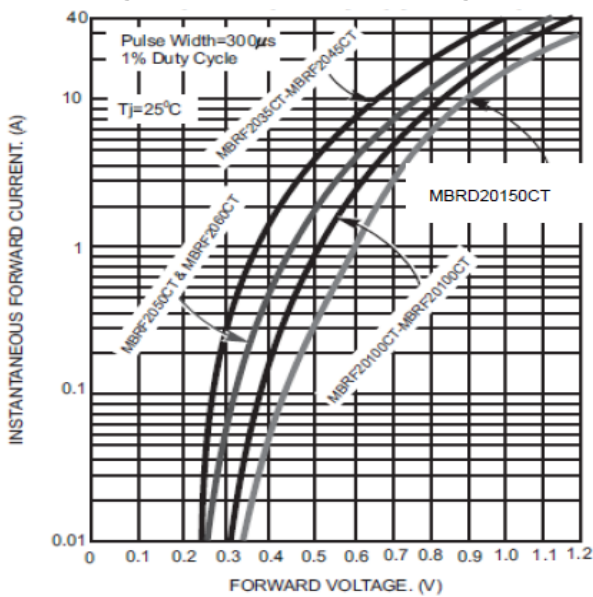


Fig.3 – Typical Forward Voltage Characteristics

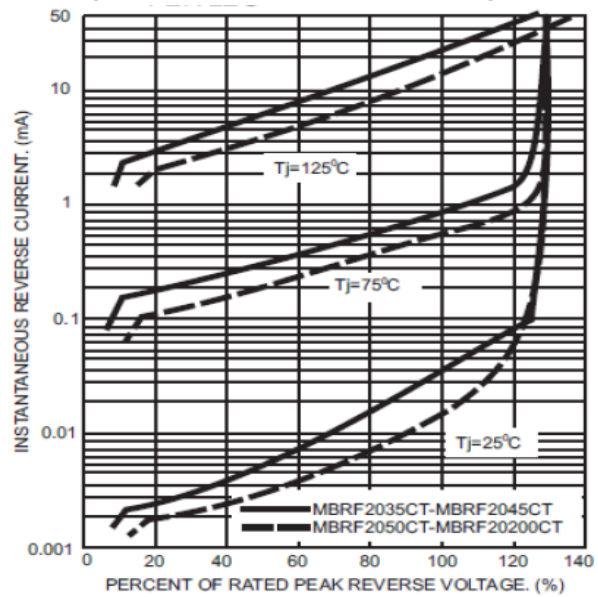


Fig.4 – Typical Reverse Current Characteristics

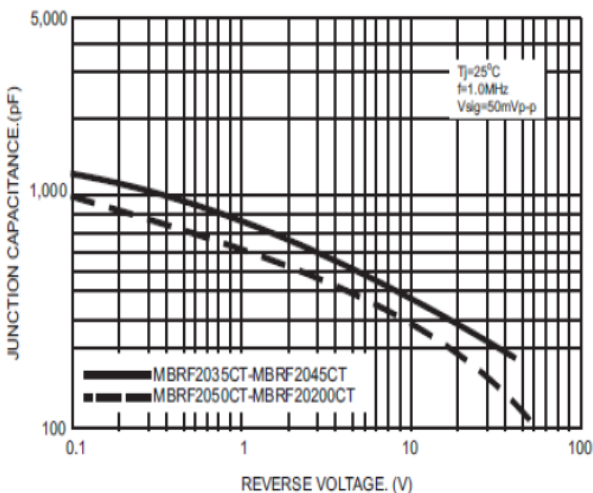
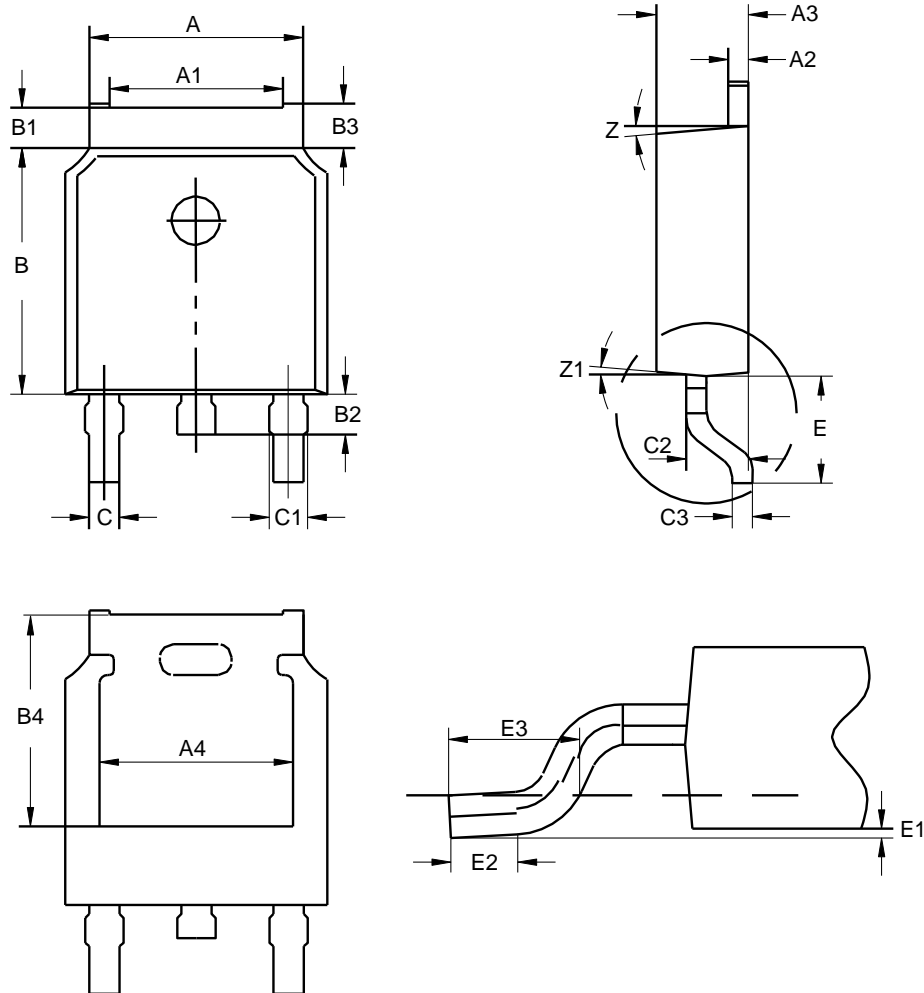


Fig.5 – Typical Junction Capacitance

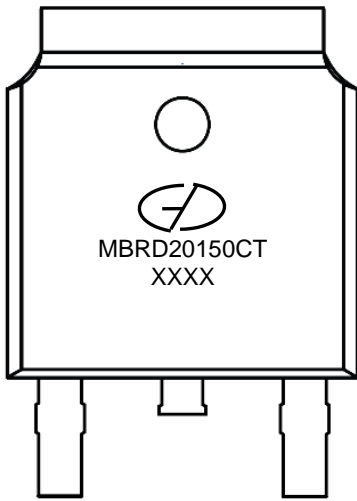
**Package Outline Dimensions** (Unit: millimeters)


**TO-252 (D-PAK)**



TO-252							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	6.34	6.54	6.74	C	0.66	0.76	0.86
A1	5.2	5.3	5.4	C1	0.75	0.95	1.15
A2	0.4	0.5	0.6	C2	1.34	1.54	1.74
A3	2.08	2.28	2.48	C3	0.4	0.5	0.6
A4		4.4		E	2.6	2.9	3.2
B	5.8	6.1	6.4	E1	0		0.15
B1	0.9	1.1	1.3	E2	0.7		
B2	0.8	1	1.2	E3	1.3	1.6	1.9
B3	0.82	1.02	1.22	Z		7°	
B4		5.25		Z1		7°	

**Marking Outline**



1. Logo Mark: 
2. Part Name: MBRD20150CT
3. Data code: XXXX

**Revision History**

Document Version	Date of release	Description of changes
Rev.A	2013.12.18	Released Datasheet
Rev.B	2021.01.23	Modify document format

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