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MBRD2045CT-MBRD20200CT
TO-252 Surface Mount Schottky Barrier Rectifier

Features

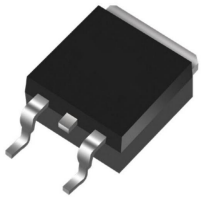
- For surface mounted applications
- High forward surge current capability
- High reliability
- High current capability

Reverse Voltage
45-200 V
Forward Current
20 Ampere

Applications

For use in low voltage high frequency inverters, free wheeling,DC/DC converters, and polarity protection applications.

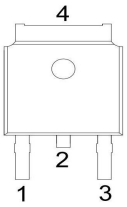
TO-252

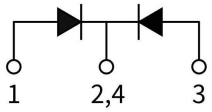


Mechanical Data

- Case: TO-252
  Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram





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

PARAMETER	SYMBOL	UNIT	MBRD 2045CT	MBRD 2060CT	MBRD 20100CT	MBRD 20150CT	MBRD 20200CT
Device marking code			MBRD 2045CT	MBRD 2060CT	MBRD 20100CT	MBRD 20150CT	MBRD 20200CT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	45	60	100	150	200
Maximum RMS Voltage	V_{RMS}	V	32	42	70	105	140
Maximum DC blocking Voltage	V_{DC}	V	45	60	100	150	200
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load,TL	$I_{F(AV)}$	A	20				
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	175				
Storage temperature	T_{stg}	°C	-55 ~ +150				
Junction temperature	T_j	°C	-55 ~ +150				
Typical Thermal Resistance	$R_{\theta JC}$	°C /W	5				
	$R_{\theta JA}$	°C /W	100				

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Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	MBRD 2045CT	MBRD 2060CT	MBRD 20100CT	MBRD 20150CT	MBRD 20200CT
Maximum instantaneous forward voltage	I_F=10A	V_F	V	0.60	0.75	0.85	0.92	
Maximum DC reverse currentat rated DC blocking voltage	V_R=V_{DC}, T_A=25°C	I_{R1}	mA	0.1		0.02		
	V_R=V_{DC}, T_A=125°C	I_{R2}		5.0		2.0		

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

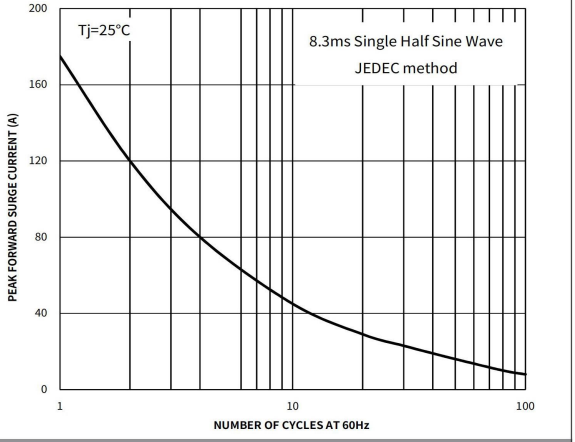

Fig.1 Maximum Non-Repetitive Peak Forward Surge Current

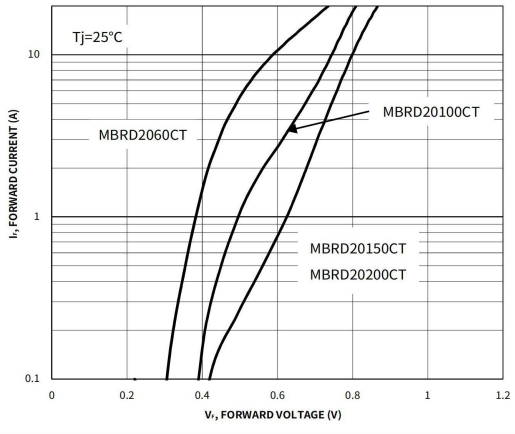

Fig.2 Typical Forward Voltage

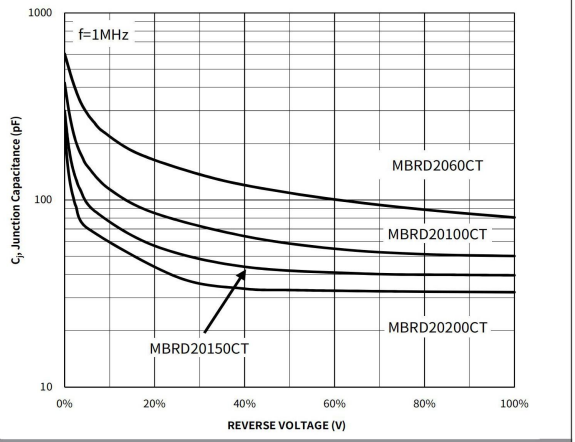

Fig.3 Typical Junction Capacitance

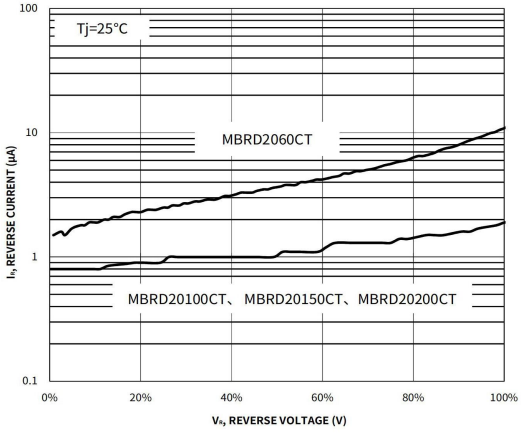

Fig.4 Typical Reverse Characteristics

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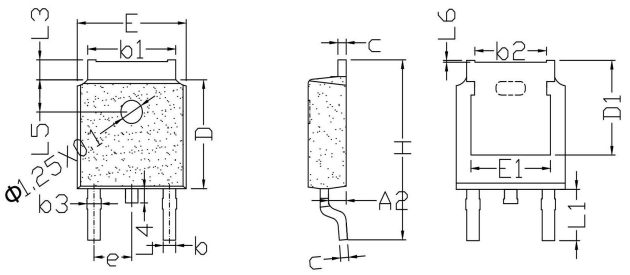
Ordering Information

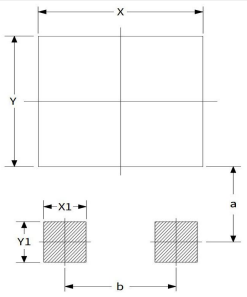
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
TO-252	R3	0.305	2500	5000	25000	13''

Package Outline Dimensions (TO-252)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A2	0.90	1.10	0.035	0.043
b	0.66	0.86	0.026	0.034
b1	5.10	5.46	0.201	0.215
b2	4.27	4.37	0.168	0.172
b3	0.78	0.90	0.031	0.035
c	0.45	0.55	0.018	0.022
D	5.90	6.30	0.232	0.248
D1	5.35 REF.		0.211REF.	
E	6.30	6.70	0.248	0.264
E1	4.83 REF.		0.190 REF.	
e	2.18	2.38	0.086	0.094
H	9.80	10.4	0.386	0.409
L1	2.70	3.10	0.106	0.122
L3	0.80	1.20	0.031	0.047
L4	0.60	1.00	0.024	0.039
L5	1.8 REF.		0.071 REF.	
L6	-	0.12	-	0.005

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
a	3.70	-	0.146	-
b	4.37	-	0.172	-
X	-	5.80	-	0.228
X1	-	1.20	-	0.047
Y	-	5.85	-	0.230
Y1	-	2.00	-	0.079