

MBRD10100CT

10A/100V Schottky Barrier Rectifier

Features

- Plastic package has underwriters laboratory flammability classification 94V-0
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guardring for over voltage protection

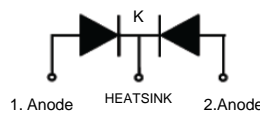
Mechanical Data

- Case: epoxy, molded
- Weight: 0.4grams (approximately)
- Finish: all external surfaces corrosion resistant and terminal leads readily solderable
- Lead temperature for soldering purpose: 260°C max. for 10 sec
- 2500 units per reel

TO-252 (D-PAK)



Schematic Diagram



Maximum Ratings and Electrical Characteristics (T_A=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
V _{RRM}	Maximum Repetitive Peak Reverse Voltage	100	V
V _{RWM}	Working Peak Reverse Voltage	100	V
V _{DC}	Maximum DC Blocking Voltage	100	V
I _{F(AV)}	Maximum Average Forward Rectified Current @ T _C =105°C	Total Device: 10 Per Diode: 5	A
I _{FSM}	Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load Per Diode	120	A
I _{RRM}	Peak Repetitive Reverse Current Per Leg at tp=2.0µs, 1KHz	1.0	A
DV/dt	Voltage Rate of Change (rated V _R)	10000	V/µs
V _F	Maximum Instantaneous Forward Voltage Per Leg	I _F =5A, T _C =25°C	0.85
		I _F =5A, T _C =125°C	0.75
I _R	Maximum Reverse Current Per Leg at Working Peak Reverse Voltage	T _J =25°C	200
		T _J =100°C	15
T _J	Operating Junction Temperature Range	-55 to +150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

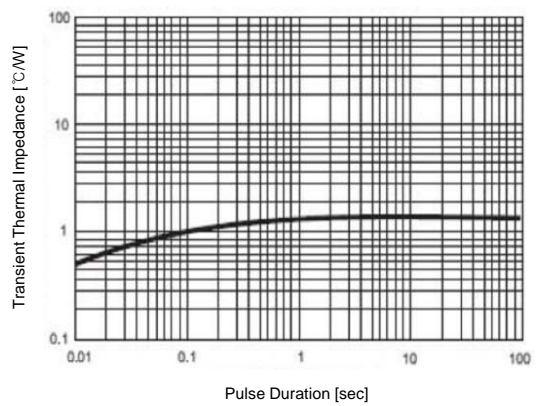
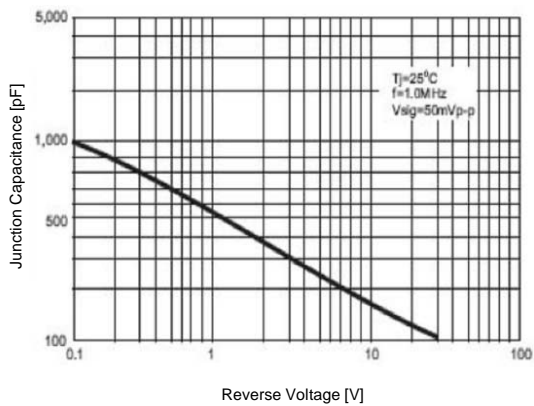
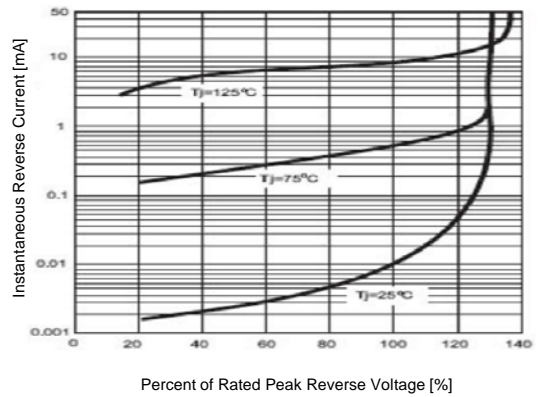
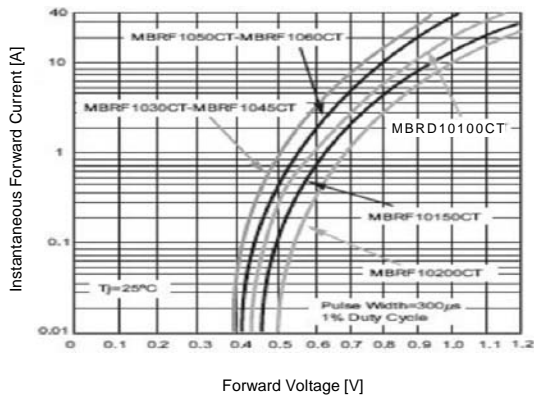
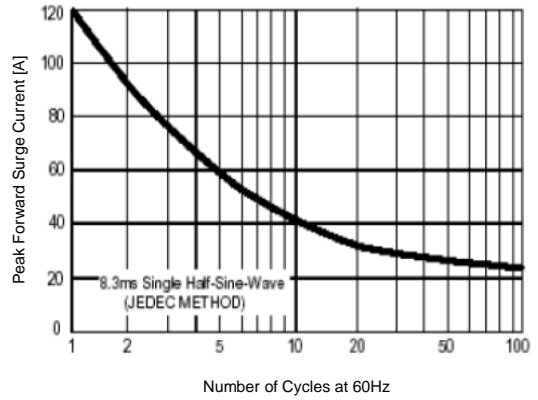
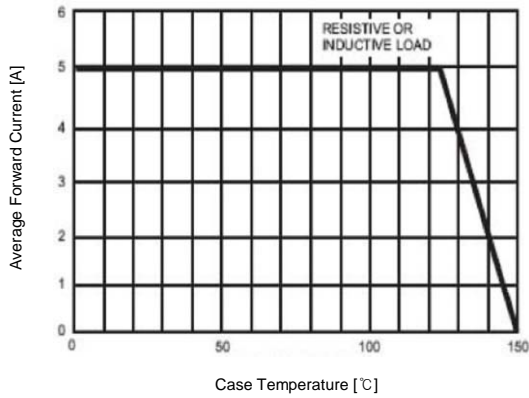
Thermal Resistance Characteristics

Symbol	Parameter	Value	Unit
R _{θJC}	Thermal Resistance, Junction-to-Case per Leg, Typ.	3.5	°C/W
R _{θJA}	Thermal Resistance, Junction-to-Ambient per Leg, Typ.	62.5	°C/W

Notes : Pulse test : 300us pulse width, duty cycle = 2%

Rating and Characteristic Curves

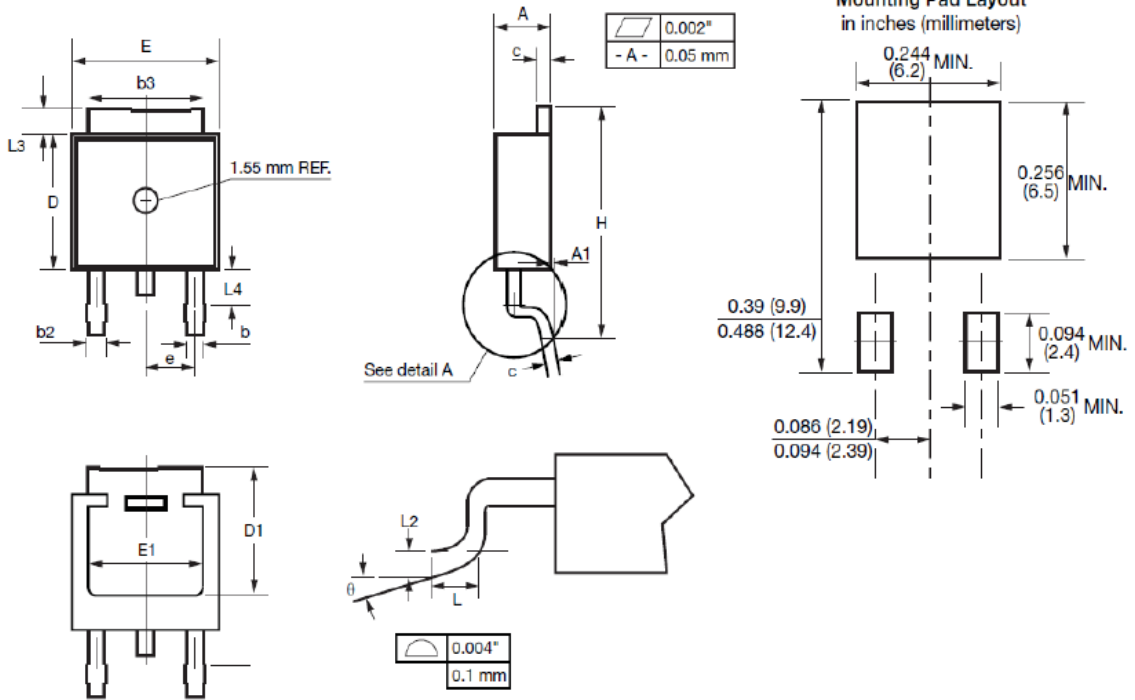
($T_A=25^\circ\text{C}$ Unless otherwise noted)



Package Outline Dimension

In millimeters

TO-252 (D-PAK)



SYMBOL	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	0.086	0.094	2.19	2.38
A1	-	0.005	-	0.13
b	0.025	0.035	0.64	0.89
b2	0.033	0.045	0.84	1.14
b3	0.205	0.215	5.21	5.46
c	0.018	0.024	0.46	0.61
D	0.235	0.250	5.97	6.22
D1	0.205	-	5.21	-
E	0.250	0.265	6.35	6.73
E1	0.190	-	4.83	-
e	0.090 BSC.		2.29 BSC.	
H	0.380	0.410	9.65	10.41
L	0.055	0.070	1.40	1.78
L2	0.020 BSC.		0.51 BSC.	
L3	0.035	0.050	0.89	1.27
L4	0.025	0.039	0.64	1.01
θ	0°	8°	0°	8°

Note

- Conforms to JEDEC TO-252 variation AA except dimension "D"