

Dual Common Cathode Schottky Rectifier

FEATURES

- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



TO-220AB



MECHANICAL DATA

Case: TO-220AB

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B106

Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 5 in-lbs maximum

Weight: 1.88 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25℃ unless otherwise noted)										
PARAMETER	SYMBOL	MBR 2035 CT-Y	MBR 2045 CT-Y	MBR 2050 CT-Y	MBR 2060 CT-Y	MBR 2090 CT-Y	MBR 20100 CT-Y	MBR 20150 CT-Y	MBR 20200 CT-Y	UNIT
Marking code		MBR 2035 CT	MBR 2045 CT	MBR 2050 CT	MBR 2060 CT	MBR 2090 CT	MBR 20100 CT	MBR 20150 CT	MBR 20200 CT	
Maximum repetitive peak reverse voltage	V _{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS voltage	V _{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC blocking voltage	V _{DC}	35	45	50	60	90	100	150	200	V
Maximum average forward rectified current	I _{F(AV)}	20								A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I _{FRM}	20								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	150								A
Peak repetitive reverse surge current (Note 1)	I _R	1		0.5						A
Maximum instantaneous forward voltage (Note 2) I _F =10A, T _J =25℃ I _F =10A, T _J =125℃ I _F =20A, T _J =25℃ I _F =20A, T _J =125℃	V _F	-		0.80		0.85		0.99		V
		0.57		0.70		0.75		0.87		
		0.84		0.95		0.95		1.23		
		0.72		0.85		0.85		1.10		
Maximum reverse current @ rated VR T _J =25℃ T _J =125℃	I _R	0.1								mA
		15		10		5		0.15		
Voltage rate of change (Rated V _R)	dV/dt	10000								V/μs
Typical thermal resistance	R _{θJC}	1.0				2.0				℃/W
Operating junction temperature range	T _J	- 55 to +150								℃
Storage temperature range	T _{STG}	- 55 to +150								℃

Note 1: $t_p = 2.0 \mu s$, 1.0KHz

Note 2: Pulse test with $PW=300\mu s$, 1% duty cycle

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MBR20xxCT-Y (Note 1)	C0	Suffix "G"	TO-220AB	50 / Tube

Note 1: "xx" defines voltage from 35V (MBR2035CT-Y) to 200V (MBR20200CT-Y)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBR2060CT-Y C0	MBR2060CT-Y	C0		
MBR2060CT-Y C0G	MBR2060CT-Y	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1- FORWARD CURRENT DERATING CURVE

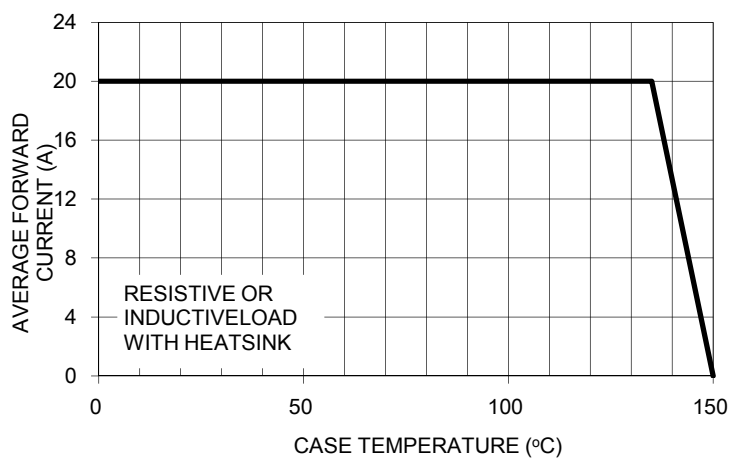


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

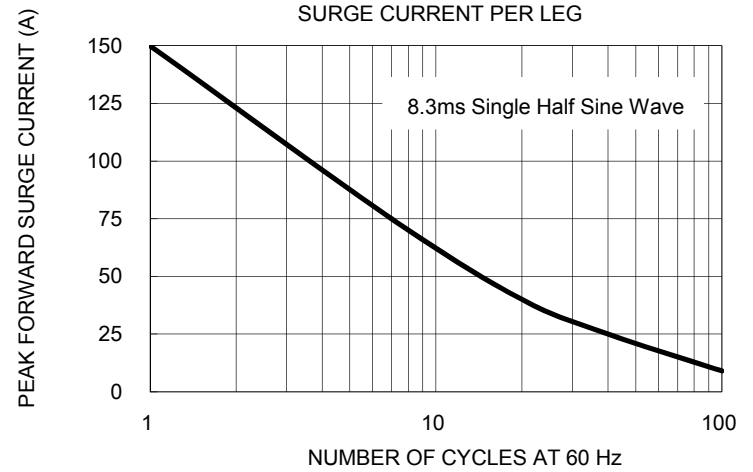


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

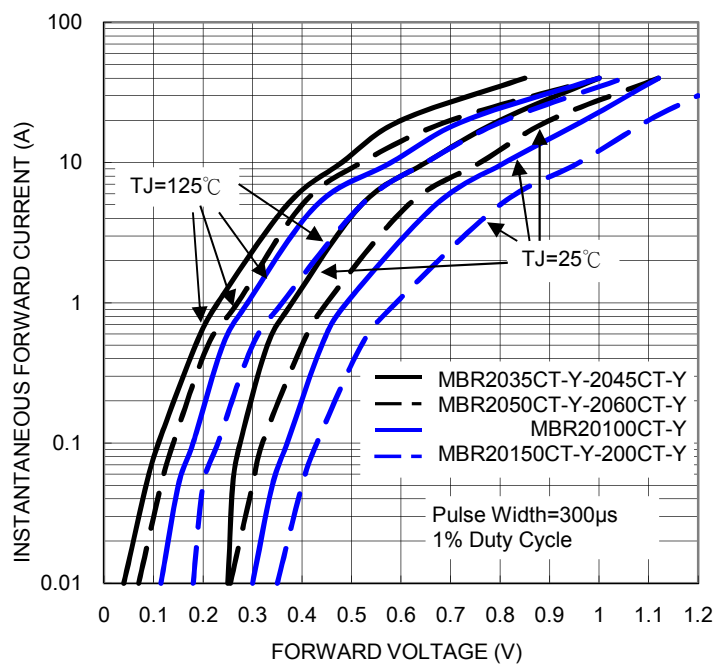


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

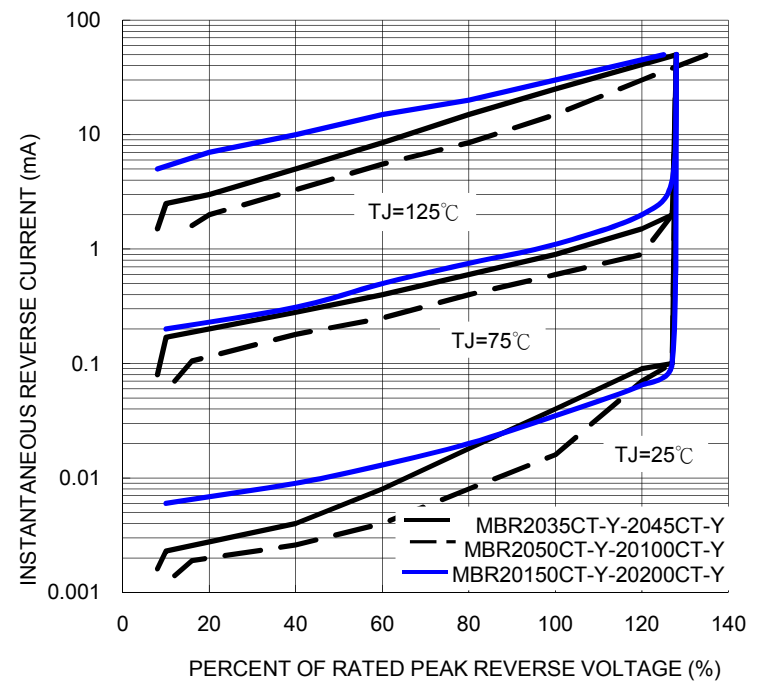


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

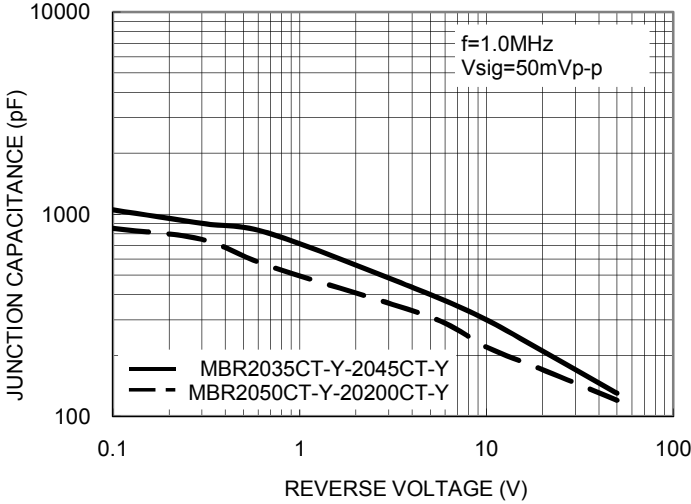
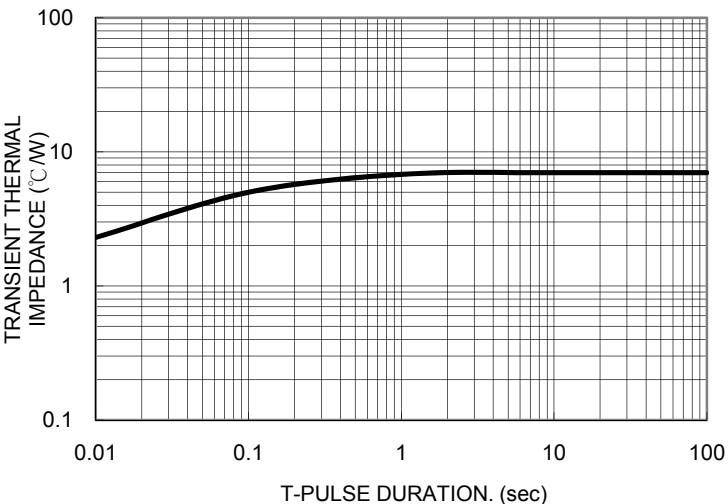
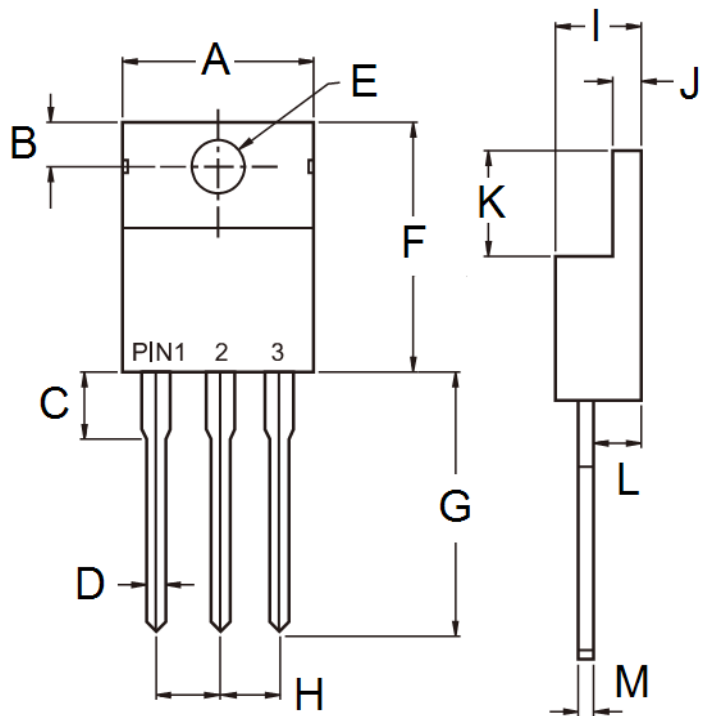


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.62	3.44	0.103	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	13.19	14.79	0.519	0.582
H	2.41	2.67	0.095	0.105
I	4.42	4.76	0.174	0.187
J	1.14	1.40	0.045	0.055
K	5.84	6.86	0.230	0.270
L	2.20	2.80	0.087	0.110
M	0.35	0.64	0.014	0.025

MARKING DIAGRAM



P/N = Marking Code
G = Green Compound
YWW = Date Code
F = Factory Code

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