

## 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



### MECHANICAL DATA

**Case:** ITO-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-B102

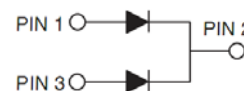
Meet JESD 201 class 1A whisker test

**Polarity:** As marked

**Mounting torque:** 5 in-lbs maximum

**Weight:** 1.7 g (approximately)

**ITO-220AB**



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)							
PARAMETER	SYMBOL	MBRF 1045 CT-Y	MBRF 1060 CT-Y	MBRF 10100 CT-Y	MBRF 10150 CT-Y	MBRF 10200 CT-Y	UNIT
Marking code		MBRF1045CT	MBRF1060CT	MBRF10100CT	MBRF10150CT	MBRF10200CT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	45	60	100	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	31	42	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	45	60	100	150	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	10					A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I <sub>FRM</sub>	10					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	120					A
Peak repetitive reverse surge current (Note 1)	I <sub>RSM</sub>	0.5					A
Maximum instantaneous forward voltage (Note 2) I <sub>F</sub> = 5 A, T <sub>J</sub> =25°C I <sub>F</sub> = 5 A, T <sub>J</sub> =125°C I <sub>F</sub> = 10 A, T <sub>J</sub> =25°C I <sub>F</sub> = 10 A, T <sub>J</sub> =125°C	V <sub>F</sub>	0.70 0.57 0.80 0.67	0.80 0.65 0.90 0.75	0.85 0.75 0.95 0.85	0.88 0.78 0.98 0.88		V
Maximum reverse current @ rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	0.1					mA
		15	10	5			
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000					V/μs
Typical thermal resistance	R <sub>θJC</sub>	3.5					°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150					°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150					°C

Note 1: t<sub>p</sub> = 2.0 μs, 1.0KHz

Note 2: Pulse test with PW=300μs, 1% duty cycle

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MBRF10xxCT-Y (Note 1)	C0	Suffix "G"	TO-220AB	50 / Tube

Note 1: "xx" defines voltage from 45V (MBRF1045CT-Y) to 200V (MBRF10200CT-Y)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBRF1060CT-Y C0	MBRF1060CT-Y	C0		
MBRF1060CT-Y C0G	MBRF1060CT-Y	C0	G	Green compound

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

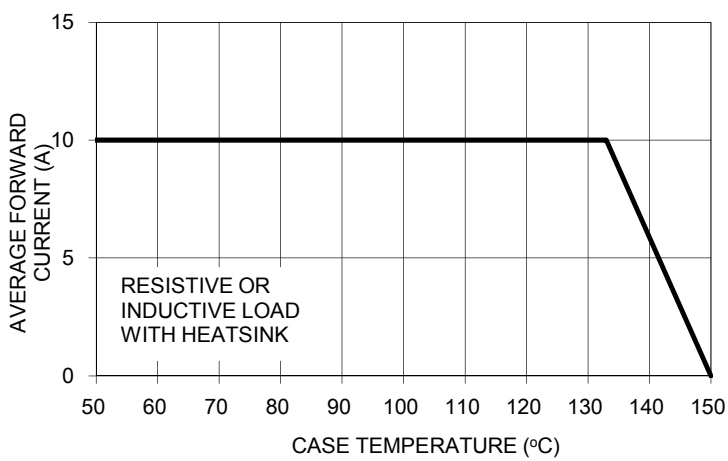


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

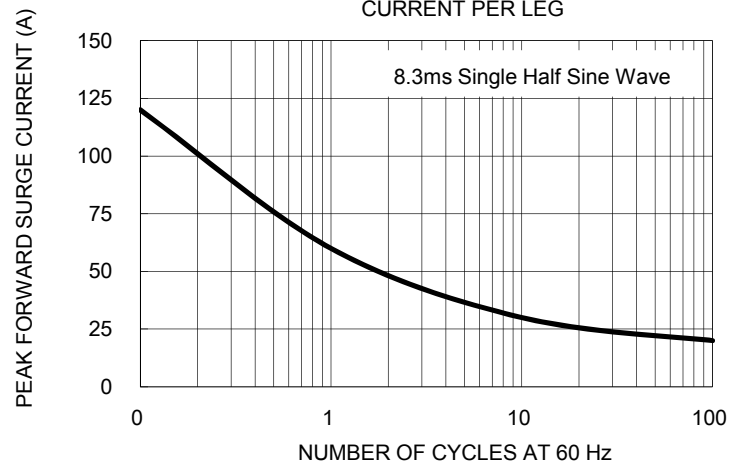


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

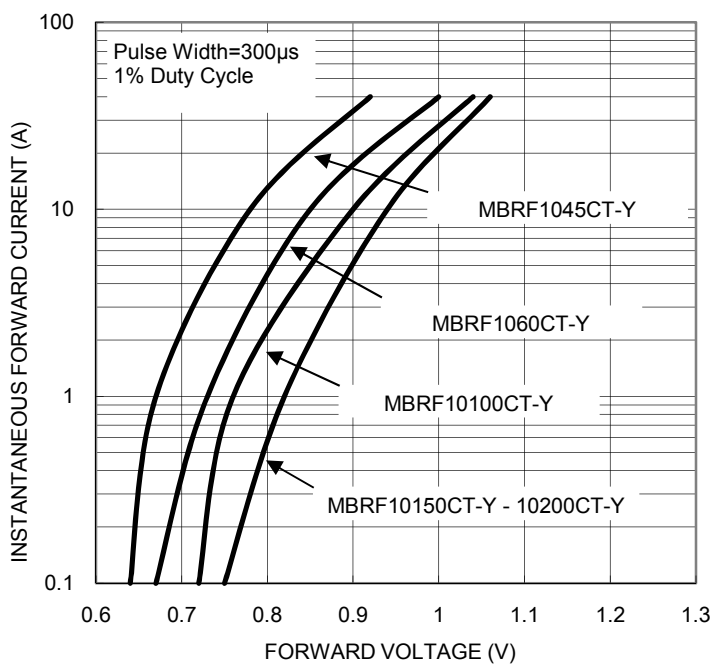


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

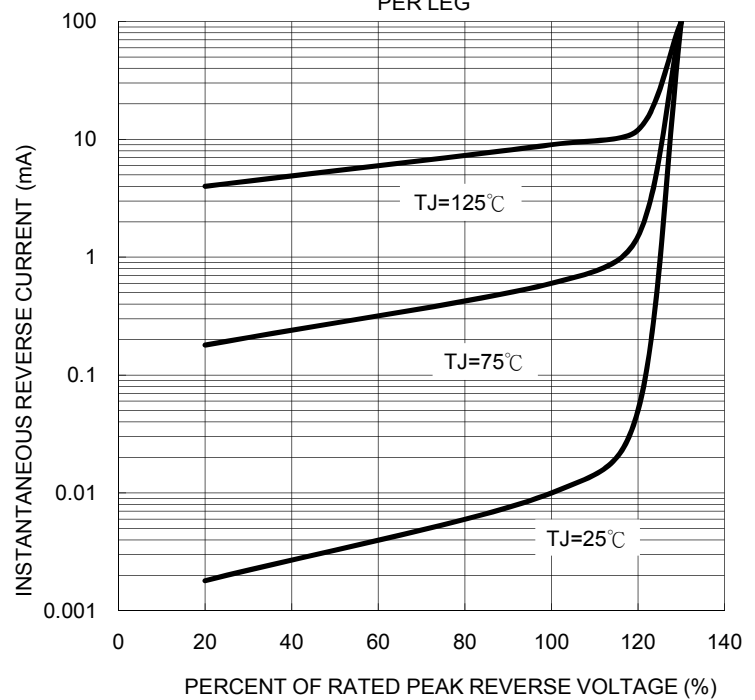


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

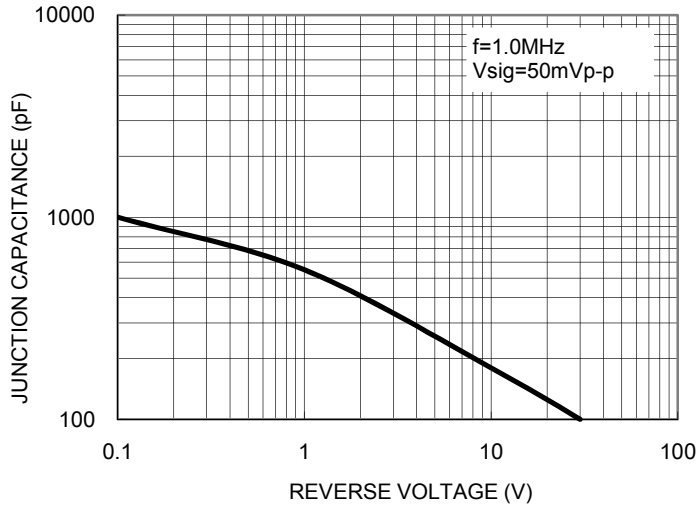
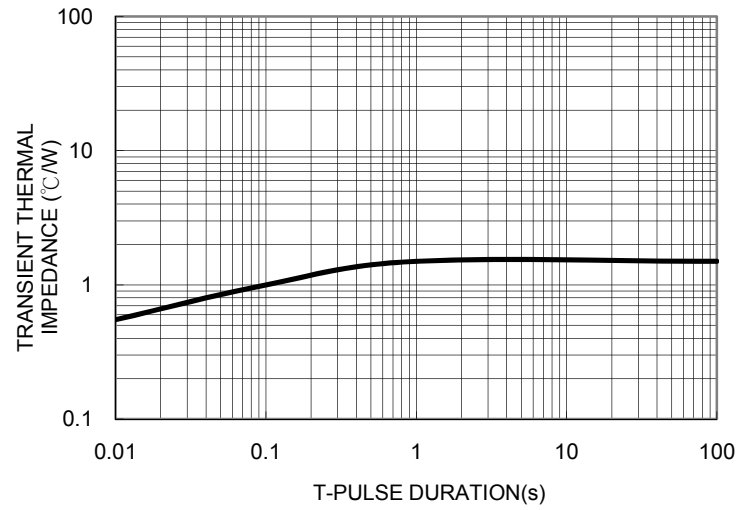
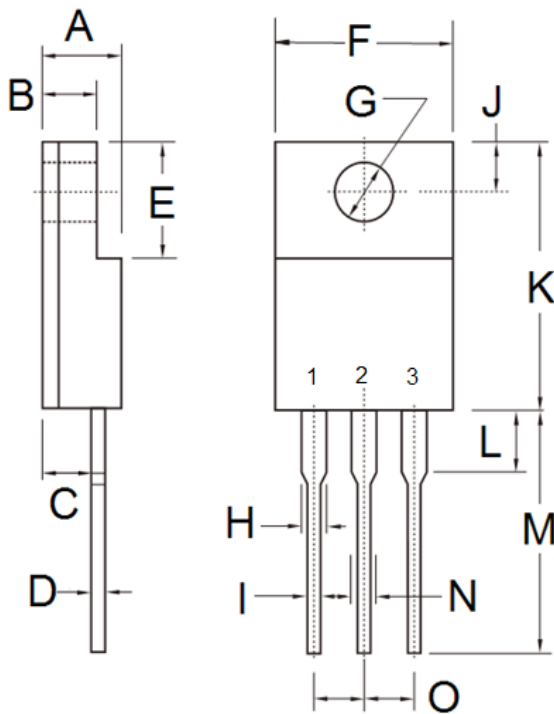


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.16	0.098	0.124
C	2.30	2.96	0.091	0.117
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.95	1.45	0.037	0.057
I	0.50	0.90	0.020	0.035
J	2.40	3.20	0.094	0.126
K	14.80	15.50	0.583	0.610
L	-	4.10	-	0.161
M	12.60	13.80	0.496	0.543
N	-	1.80	-	0.071
O	2.41	2.67	0.095	0.105

MARKING DIAGRAM



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

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