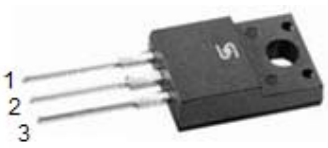
Dual Common Cathode Schottky Rectifier

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



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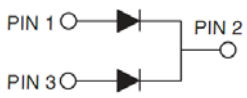


Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: ITO-220AB

Molding compound, UL flammability classification rating 94V-0

Packing code with suffix "G" means 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: 0.56 Nm max.

Weight: 1.7 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MBRF 3045 CT-Y	MBRF 3060 CT-Y	MBRF 3080 CT-Y	MBRF 30100 CT-Y	MBRF 30150 CT-Y	MBRF 30200 CT-Y	UNIT
Marking code		MBRF 3045CT	MBRF 3060CT	MBRF 3080CT	MBRF 30100CT	MBRF 30150CT	MBRF 30200CT	
Maximum repetitive peak reverse voltage	V_{RRM}	45	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	31	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	45	60	80	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	30						A
Peak repetitive forward current (Rated VR, Square wave, 20KHz)	I_{FRM}	30						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	200						A
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1		0.5				A
Maximum instantaneous forward voltage (Note 2) I_F=15A, T_J=25°C I_F=15A, T_J=125°C I_F=30A, T_J=25°C I_F=30A, T_J=125°C	V_F	 0.70 0.60 0.82 0.73	 0.78 0.68 0.90 0.78	 0.85 0.72 0.94 0.82		 0.95 0.80 1.05 0.92		V
Maximum reverse current @ rated VR T_J=25 °C	I_R	0.2						mA
T_J=125 °C		40	15	10				
Voltage rate of change (Rated V_R)	dV/dt	10000						V/μs
Typical thermal resistance	$R_{\theta JC}$	4						°C/W
Operating junction temperature range	T_J	- 55 to +150						°C
Storage temperature range	T_{STG}	- 55 to +150						°C

Note 1: tp = 2.0 μs, 1.0KHz

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

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
MBRF30xxCT-Y (Note 1)	C0	G	ITO-220AB	50 / Tube

Note 1: "xx" defines voltage from 45V (MBRF3045CT-Y) to 200V (MBRF30200CT-Y)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBRF3060CT-Y C0	MBRF3060CT-Y	C0		
MBRF3060CT-Y C0G	MBRF3060CT-Y	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

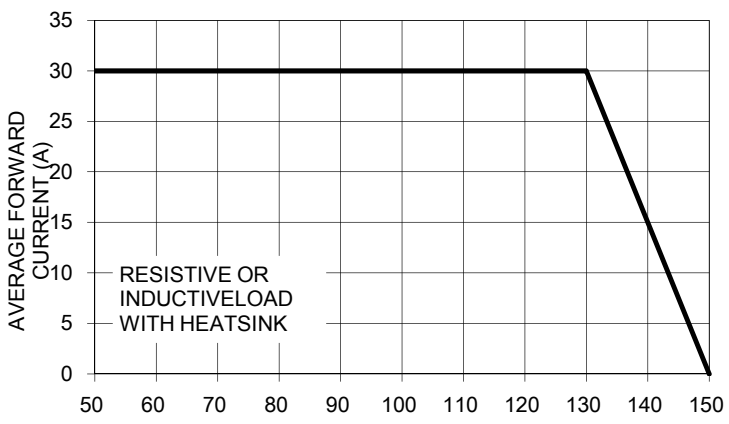


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

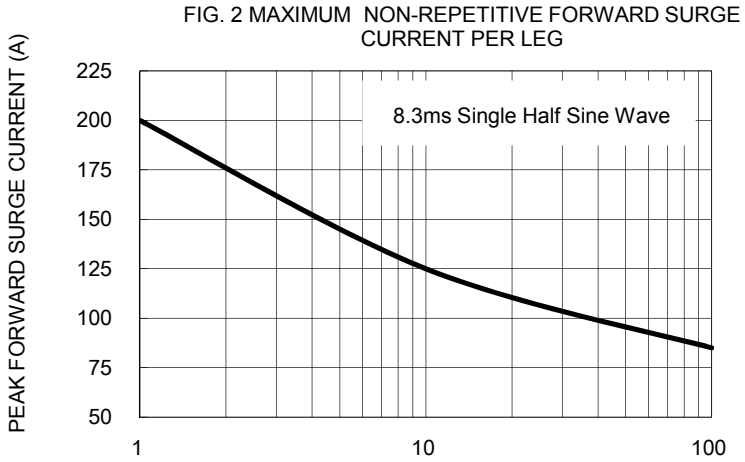


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

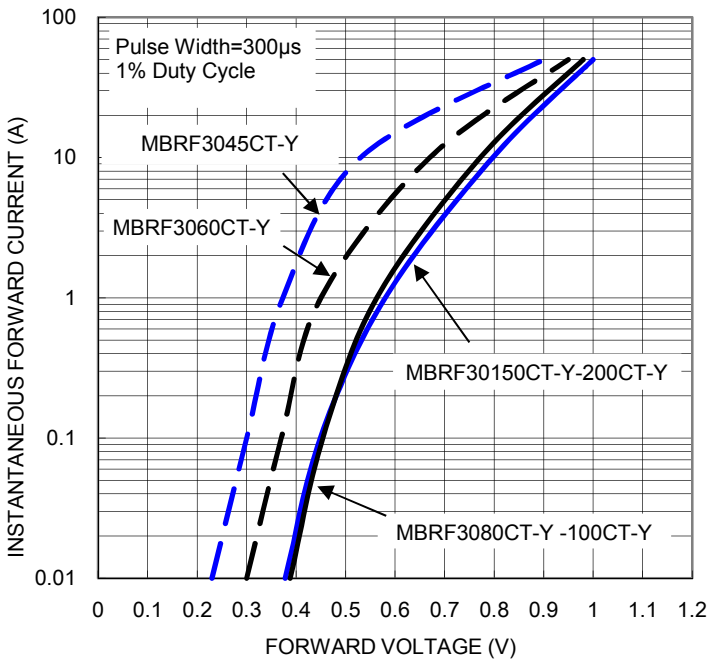


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

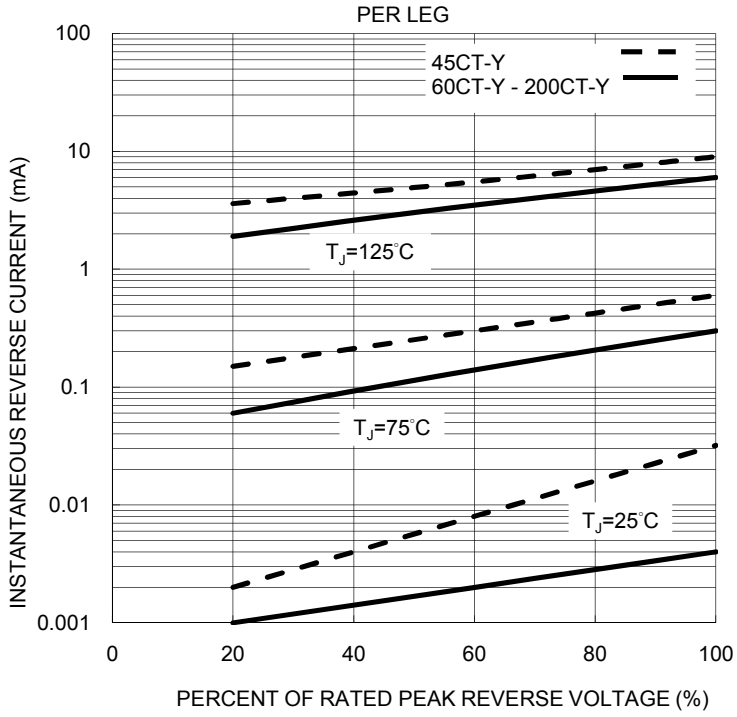


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

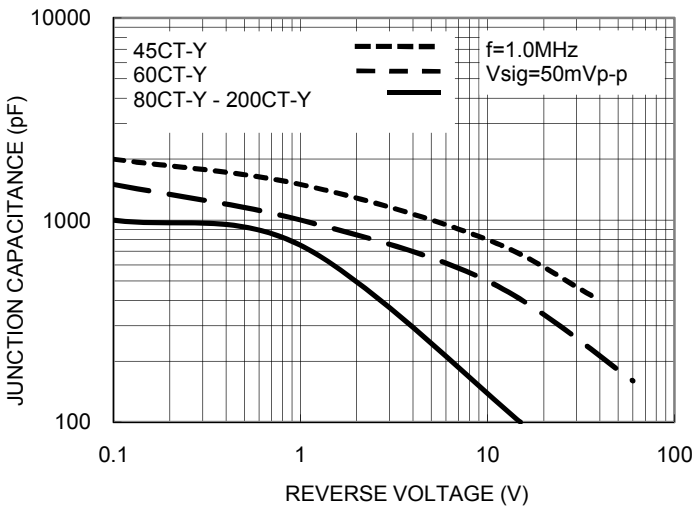
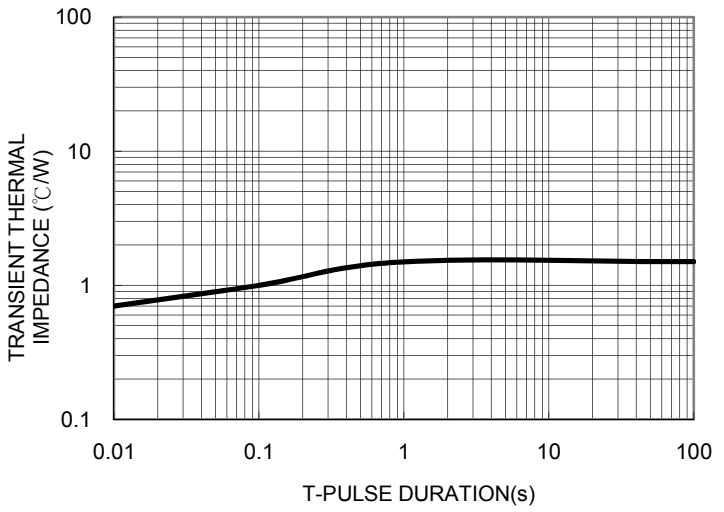


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



PACKAGE OUTLINE DIMENSIONS

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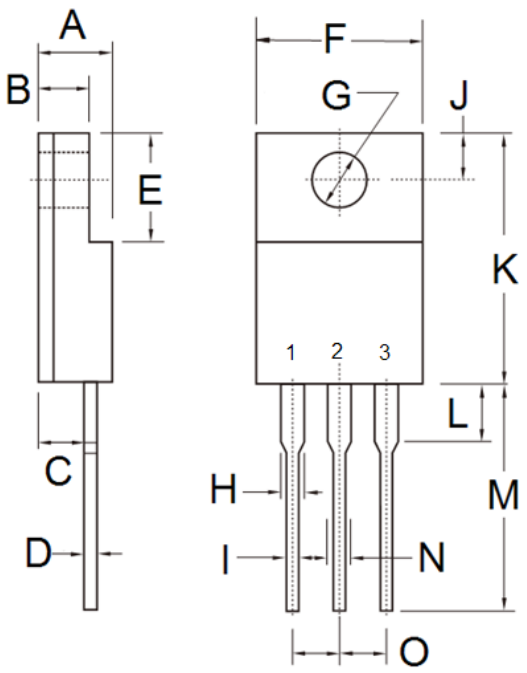

DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.16	0.098	0.124
C	2.30	2.96	0.091	0.117
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.95	1.45	0.037	0.057
I	0.50	0.90	0.020	0.035
J	2.40	3.20	0.094	0.126
K	14.80	15.50	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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