

Dual Common Cathode Schottky Rectifier

FEATURES

- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- UL Recognized File # E-326243
- 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-247AD (TO-3P)


MECHANICAL DATA

Case: TO-247AD (TO-3P)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Polarity: As marked

Mounting torque: 10 in-lbs maximum

Weight: 6.1 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25℃ unless otherwise noted)										
PARAMETER	SYMBOL	MBR 3035 PT	MBR 3045 PT	MBR 3050 PT	MBR 3060 PT	MBR 3090 PT	MBR 30100 PT	MBR 30150 PT	MBR 30200 PT	UNIT
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)}	30								A
Peak repetitive forward current (Rated V _R , 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}	2		1						A
Maximum instantaneous forward voltage (Note 2) I _F =15A, T _J =25℃ I _F =15A, T _J =125℃ I _F =30A, T _J =25℃ I _F =30A, T _J =125℃	V _F	-		0.75		0.85		0.95	1.05	V
		0.60		0.65		0.75		0.92	-	
		0.82		-		-		1.02	1.10	
		0.73		-		-		0.98	-	
Maximum reverse current @ rated VR T _J =25 ℃ T _J =125 ℃	I _R	1				0.5			0.1	mA
		20		15		10				
Voltage rate of change,(Rated V _R)	dV/dt	10,000								V/μs
Typical thermal resistance	R _{θJC}	1.4								℃/W
Operating junction temperature range	T _J	- 55 to +150								℃
Storage temperature range	T _{STG}	- 55 to +150								℃

Note 1: 2.0 μs Pulse Width, $f=1.0\text{KHz}$

Note 2: Pulse Test : 300 μs Pulse Width, 1% Duty Cycle

ORDERING INFORMATION

PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MBR30xxPT (Note 1)	Prefix "H"	C0	Suffix "G"	TO-3P	30 / Tube

Note 1: "xx" defines voltage from 35V (MBR3035PT) to 200V (MBR30200PT)

EXAMPLE

PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBR3060PT C0	MBR3060PT		C0		
MBR3060PT C0G	MBR3060PT		C0	G	Green compound
MBR3060PTH0	MBR3060PT	H	C0		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

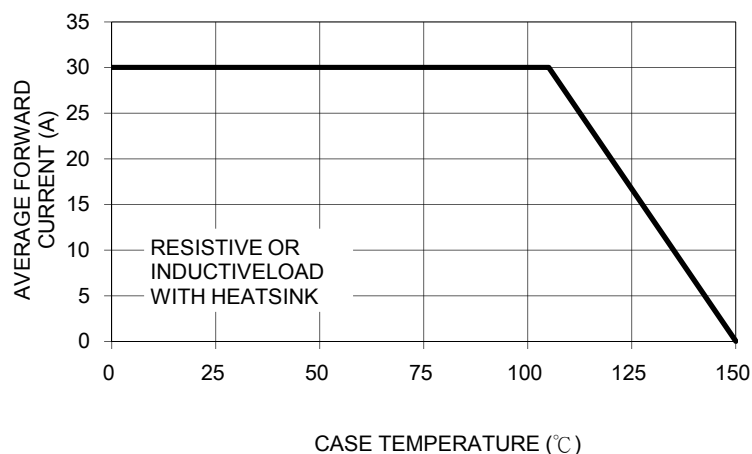


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

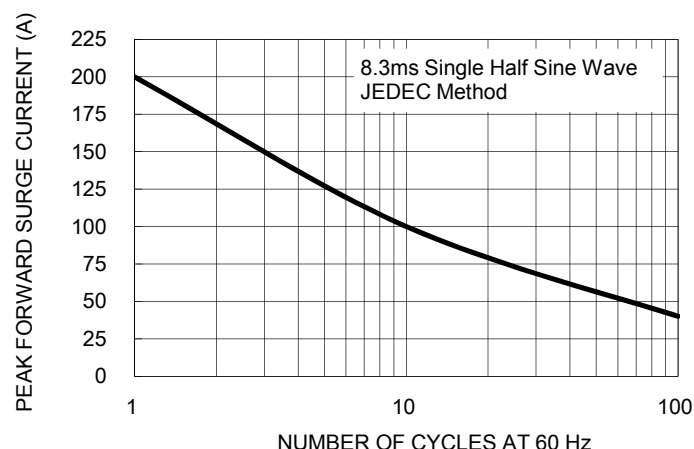


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

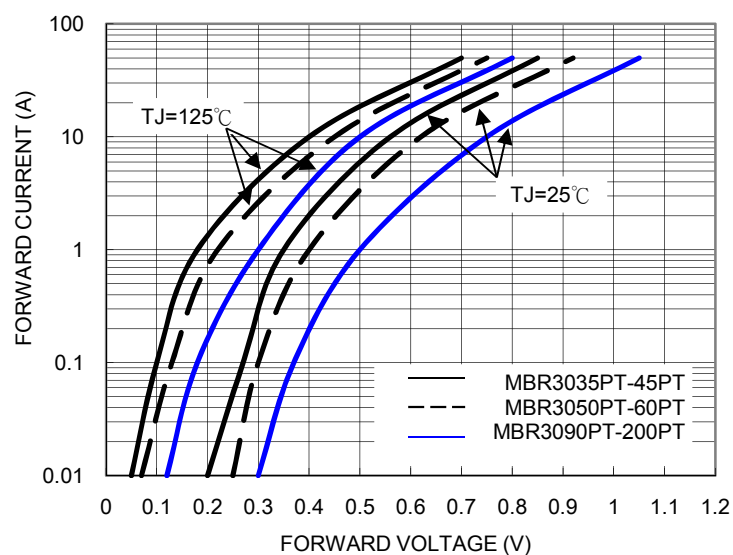


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

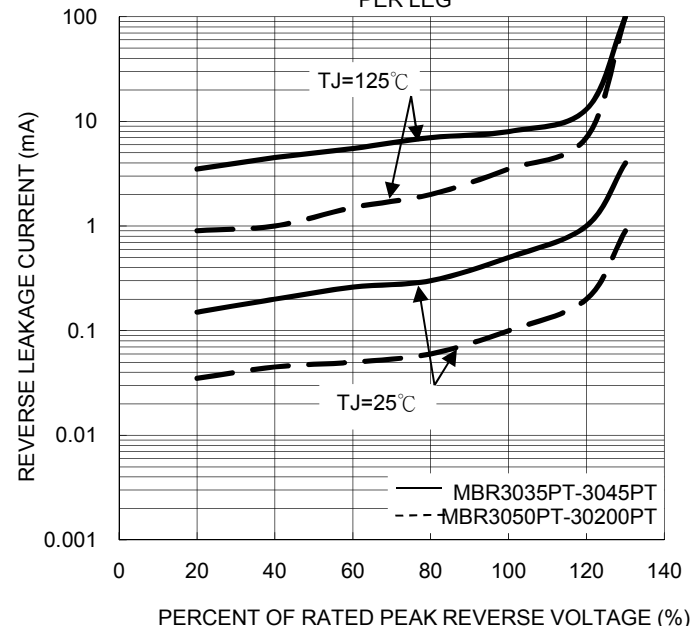


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

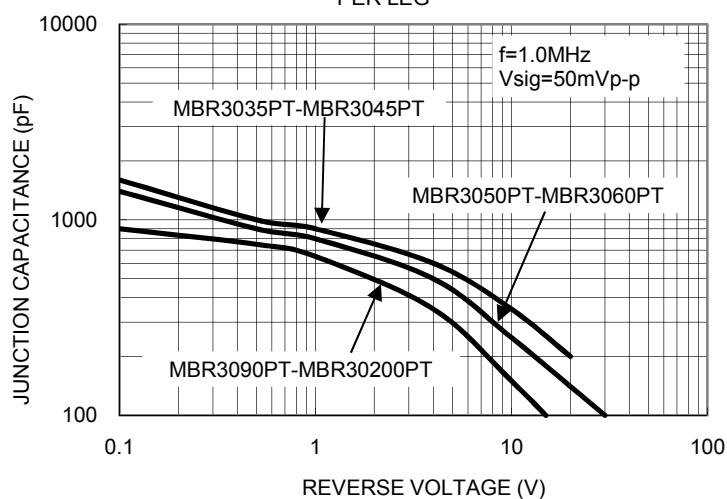
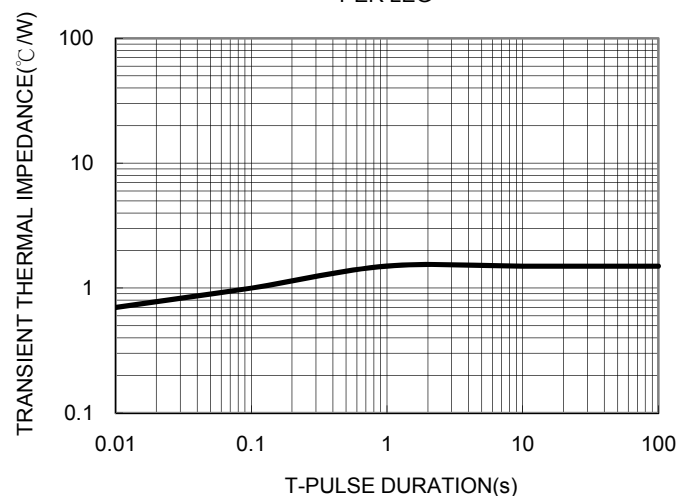
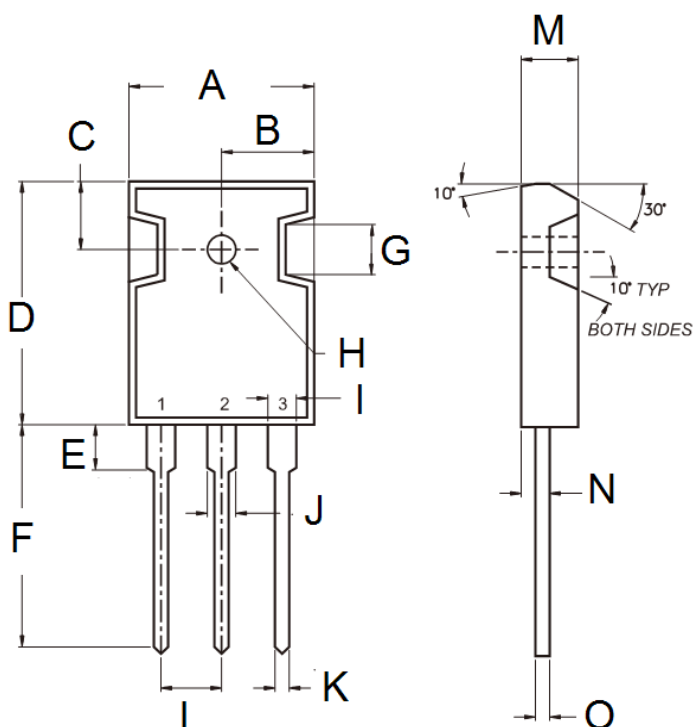


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	15.90	16.40	0.626	0.646
B	7.90	8.20	0.311	0.323
C	5.70	6.20	0.224	0.244
D	20.80	21.30	0.819	0.839
E	3.50	4.10	0.138	0.161
F	19.70	20.20	0.776	0.795
G	-	4.30	-	0.169
H	2.90	3.40	0.114	0.134
I	1.93	2.18	0.076	0.086
J	2.97	3.22	0.117	0.127
K	1.12	1.22	0.044	0.048
L	5.20	5.70	0.205	0.224
M	4.90	5.16	0.193	0.203
N	2.70	3.00	0.106	0.118
O	0.51	0.76	0.020	0.030

MARKING DIAGRAM



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

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