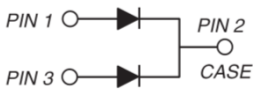
Dual Common Cathode Schottky Rectifier

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



Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: TO-220AB

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: 5 in-lbs maximum

Weight: 1.88 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)					
PARAMETER	SYMBOL	MBR 10H100CT	MBR 10H150CT	MBR 10H200CT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	100	150	200	V
Maximum RMS voltage	V_{RMS}	70	105	140	V
Maximum DC blocking voltage	V_{DC}	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	10			A
Peak repetitive forward current (Rated VR, Square Wave, 20KHz)	I_{FRM}	10			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	120			A
Peak repetitive reverse surge current (Note 1)	I_{RRM}	1.0		0.5	A
Maximum instantaneous forward voltage (Note 2) I_F= 5A, T_J=25℃ I_F= 5A, T_J=125℃ I_F=10A, T_J=25℃ I_F=10A, T_J=125℃	V_F	 0.85 0.75 0.95 0.85	 0.88 0.75 0.97 0.85		V
Maximum reverse current @ rated VR T_J=25 ℃ T_J=125 ℃	I_R	 5 1			 μA mA
Voltage rate of change (Rated V_R)	dV/dt	10000			V/μs
Typical thermal resistance	$R_{\theta JC}$	1.5			^{O}C/W
Operating junction temperature range	T_J	- 55 to +175			^{O}C
Storage temperature range	T_{STG}	- 55 to +175			^{O}C

Note 1: tp = 2.0 μs, 1.0KHz

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

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MBR10HxxxCT (Note)	Prefix "H"	C0	Suffix "G"	TO-220AB	50 / Tube

Note 1: "xxx" defines voltage from 100V (MBR10H100CT) to 200V (MBR10H200CT)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBR10H100CT C0	MBR10H100CT		C0		
MBR10H100CT C0G	MBR10H100CT		C0	G	Green compound
MBR10H100CTHC0	MBR10H100CT	H	C0		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1- FORWARD CURRENT DERATING CURVE

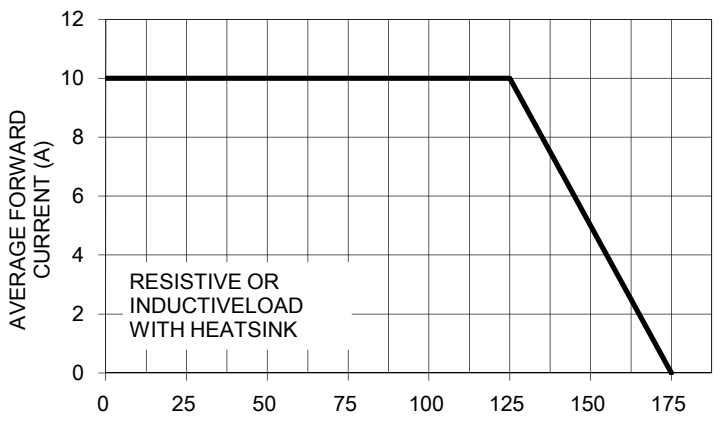


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

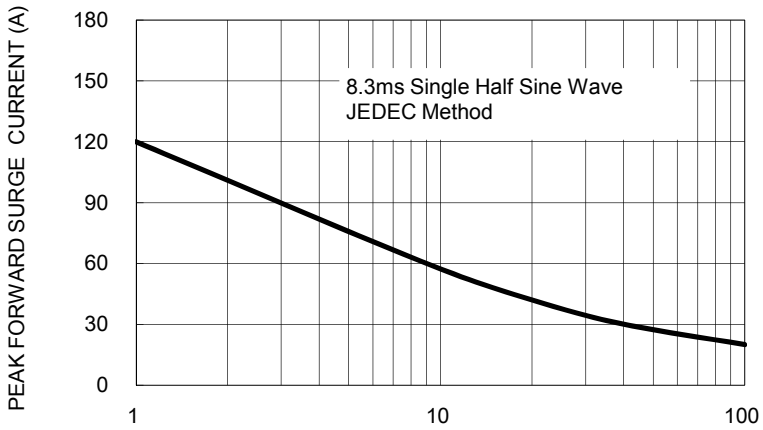


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

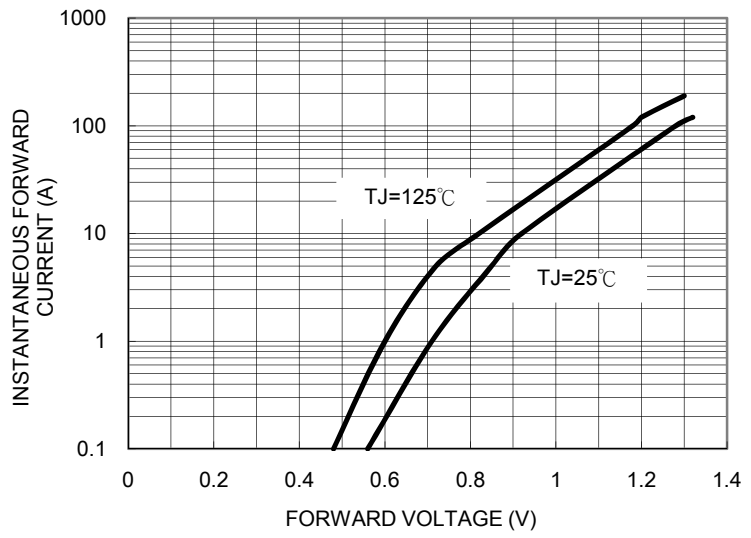


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

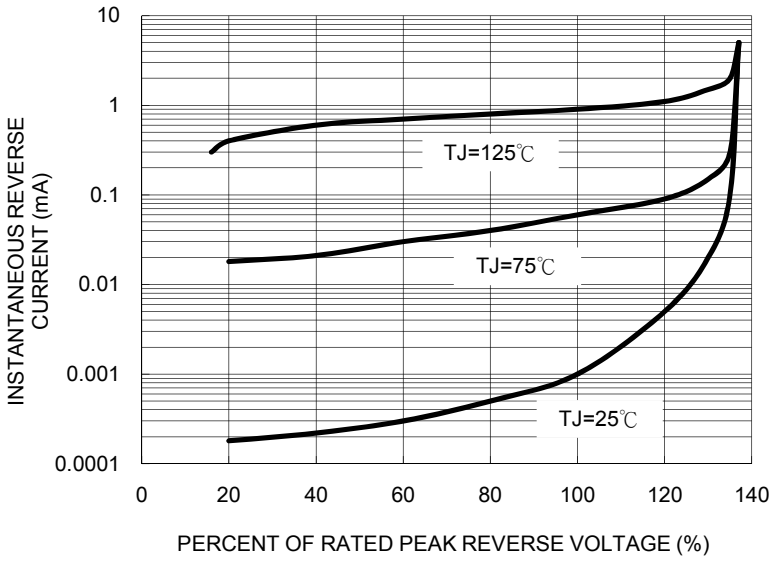


FIG. 5- TYPICAL JUNCTION CAPACITANCE

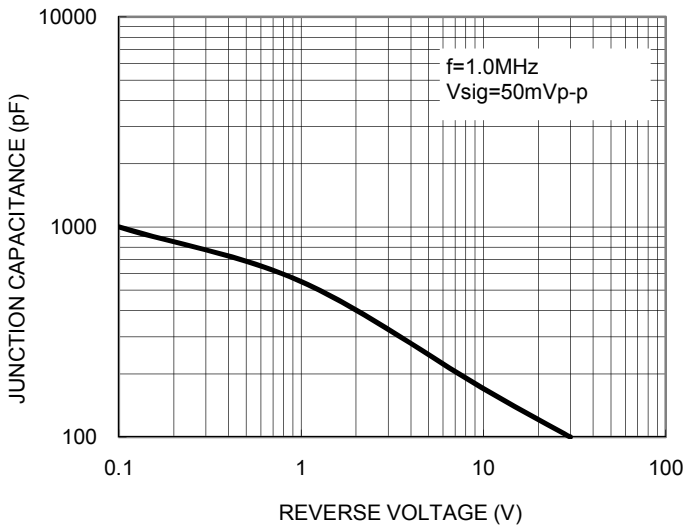
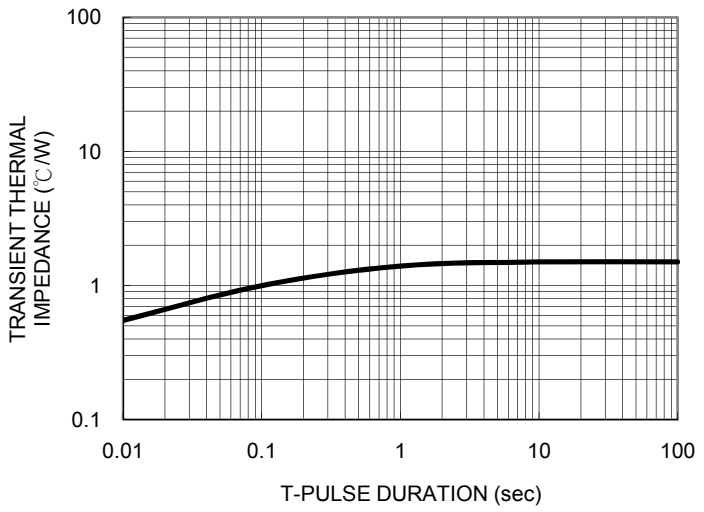
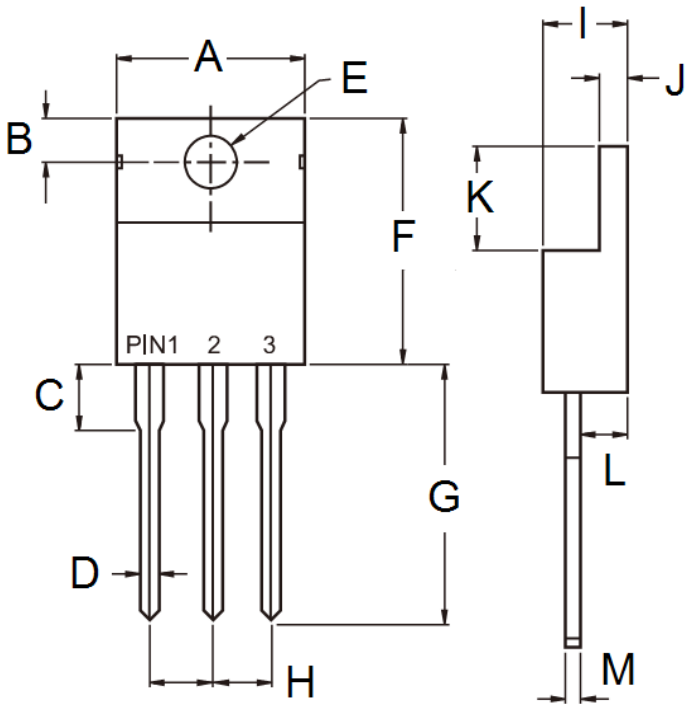


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG



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 = Specific Device Code
G = Green Compound
YWW = Date Code
F = Factory Code

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