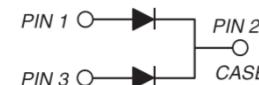


Dual Common Cathode Schottky Rectifier

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 - 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: 1.9 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MBR10L100CT		UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	100		V
Maximum RMS voltage	V_{RMS}	70		V
Maximum DC blocking voltage	V_{DC}	100		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		A
Maximum instantaneous forward voltage (Note 2) $I_F=5\text{A}, T_J=25^\circ\text{C}$ $I_F=5\text{A}, T_J=125^\circ\text{C}$ $I_F=10\text{A}, T_J=25^\circ\text{C}$ $I_F=10\text{A}, T_J=125^\circ\text{C}$	V_F	TYP 0.73 0.59 0.82 0.66	MAX 0.76 0.65 0.85 0.71	V
Maximum reverse current @ rated VR $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	TYP 0.30 0.50	MAX 20 15	μA mA
Voltage rate of change (Rated V_R)	dV/dt	10000		$\text{V}/\mu\text{s}$
Typical thermal resistance	$R_{\theta JC}$	2.8		$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-55 to +150		$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150		$^\circ\text{C}$

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

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

ORDERING INFORMATION

PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MBR10L100CT	Prefix "H"	C0	Suffix "G"	TO-220AB	50 / Tube

EXAMPLE

PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBR10L100CT C0	MBR10L100CT		C0		
MBR10L100CT C0G	MBR10L100CT		C0	G	Green compound
MBR10L100CTHC0	MBR10L100CT	H	C0		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

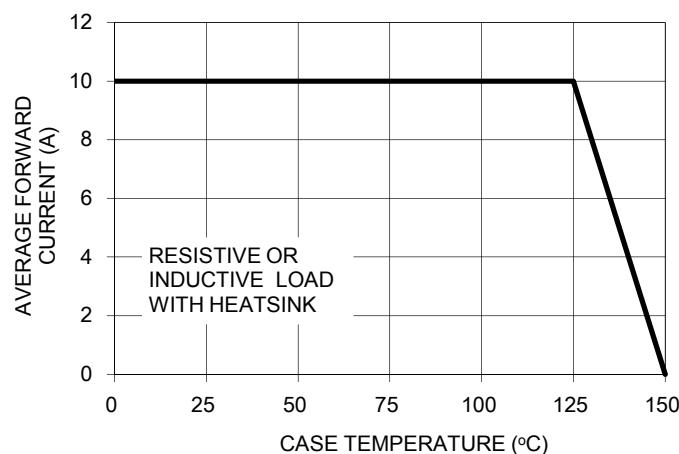
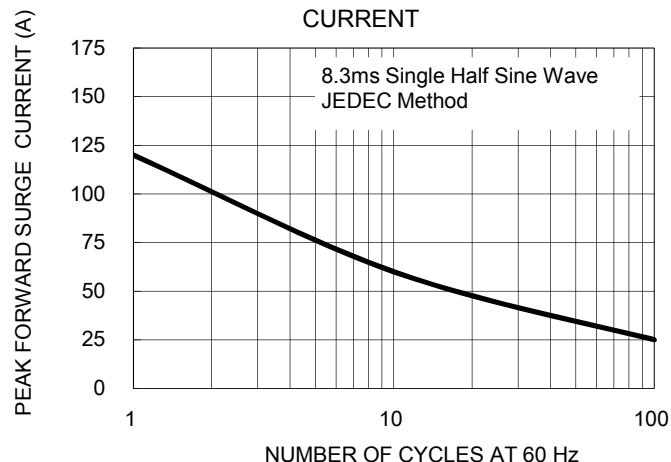
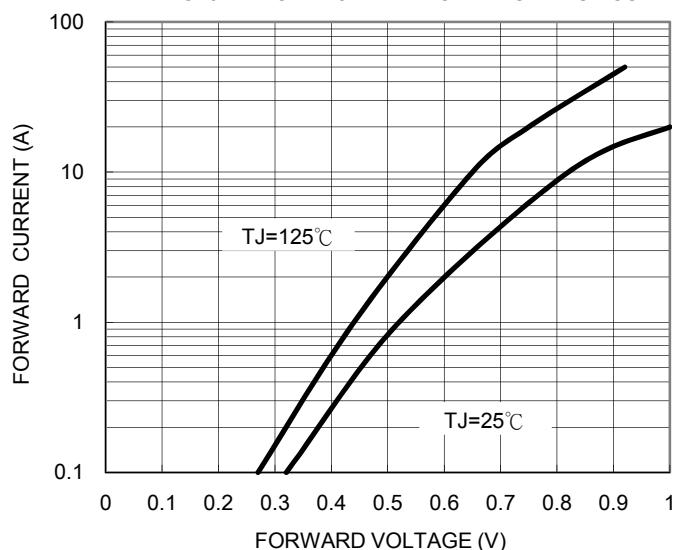
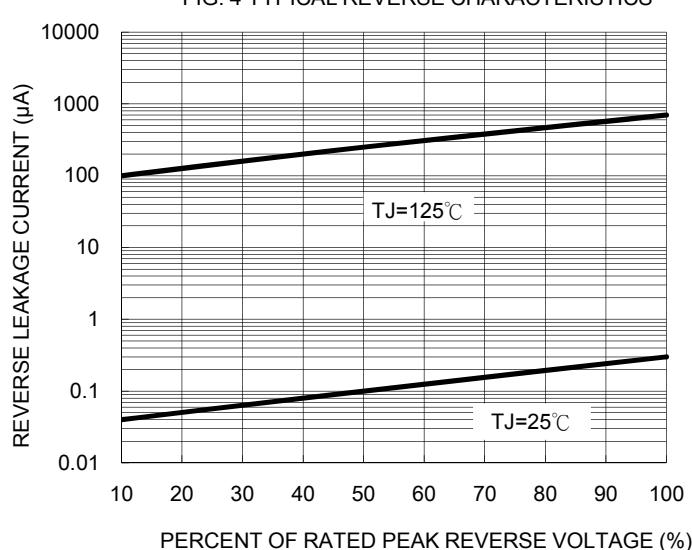
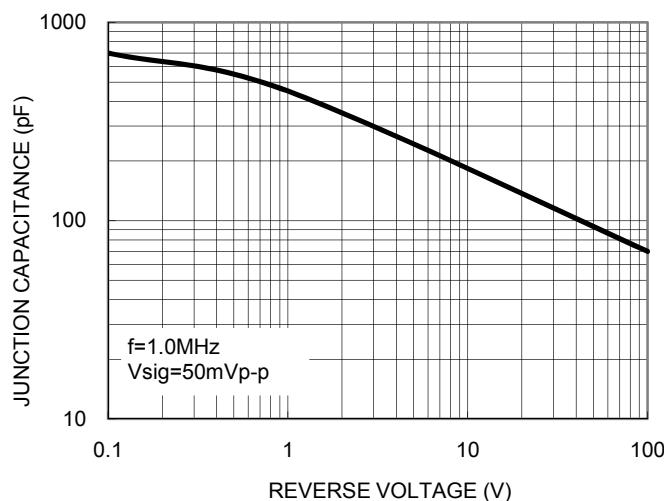
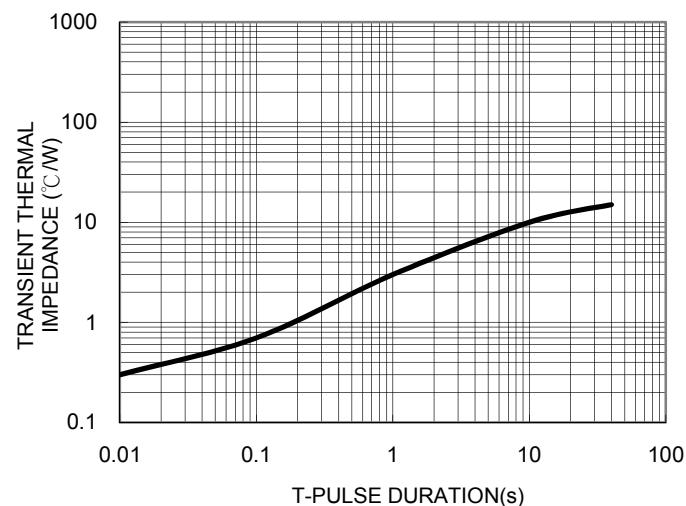
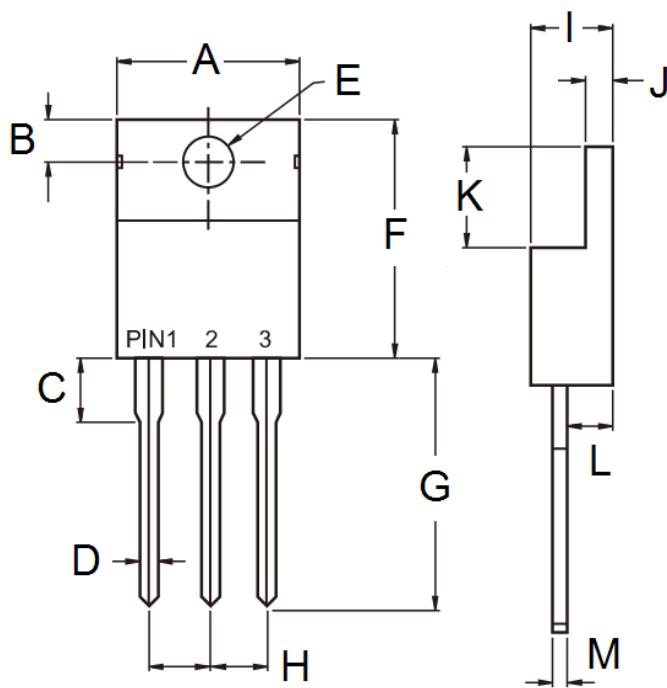
FIG.1 FORWARD CURRENT DERATING CURVE

FIG. 2 MAXIMUM FORWARD SURGE CURRENT

FIG. 3 TYPICAL FORWARD CHARACTERISTICS

FIG. 4 TYPICAL REVERSE CHARACTERISTICS


FIG. 5 TYPICAL JUNCTION CAPACITANCE

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

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