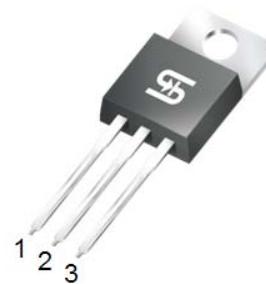


10A, 35V - 200V Dual Common Cathode Schottky Rectifiers

FEATURES

- Low power loss, high efficiency
- Guard ring for over-voltage 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



MECHANICAL DATA

Case: TO-220AB

Molding compound, UL flammability classification rating 94V-0

Part No. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

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

Meet JESD 201 class 2 whisker test

Polarity: As marked

Mounting torque: 0.56 Nm max.

Weight: 1.88 g (approximately)

TO-220AB



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

PARAMETER	SYMBOL	MBR 1035	MBR 1045	MBR 1050	MBR 1060	MBR 1090	MBR 10100	MBR 10150	MBR 10200	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	$I_{F(AV)}$					10				A
Peak repetitive forward current (Rated V_R , 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				0.5				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	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 V_R $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_R		15	10	2	5				mA
Voltage rate of change (Rated V_R)	dV/dt			10000						V/ μs
Typical thermal resistance	$R_{\theta JC}$			1.5						°C/W
Operating junction temperature range	T_J			- 55 to +150						°C
Storage temperature range	T_{STG}			- 55 to +150						°C

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

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

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
MBR10xxCT (Note 1)	H	C0	G	TO-220AB	50 / Tube

Note 1: "xx" defines voltage from 35V (MBR1035CT) to 200V (MBR10200CT)

*: Optional available

EXAMPLE					
EXAMPLE PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBR1060CTHC0G	MBR1060CT	H	C0	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

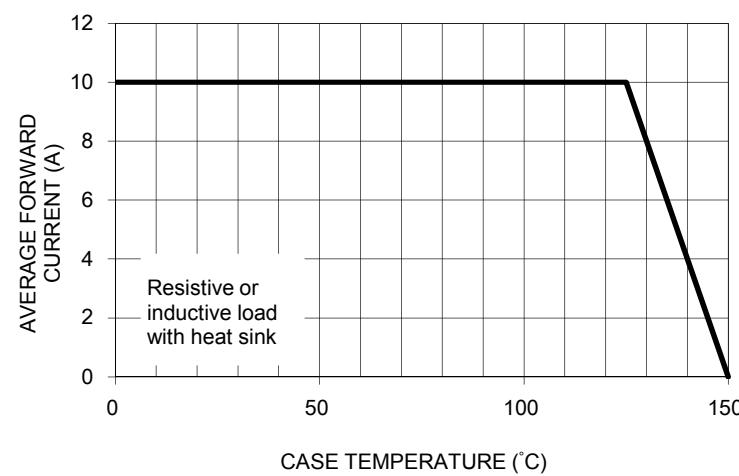


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

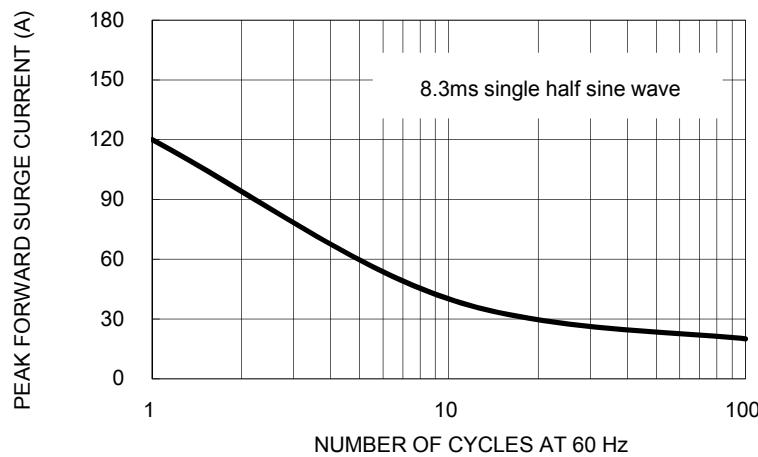


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

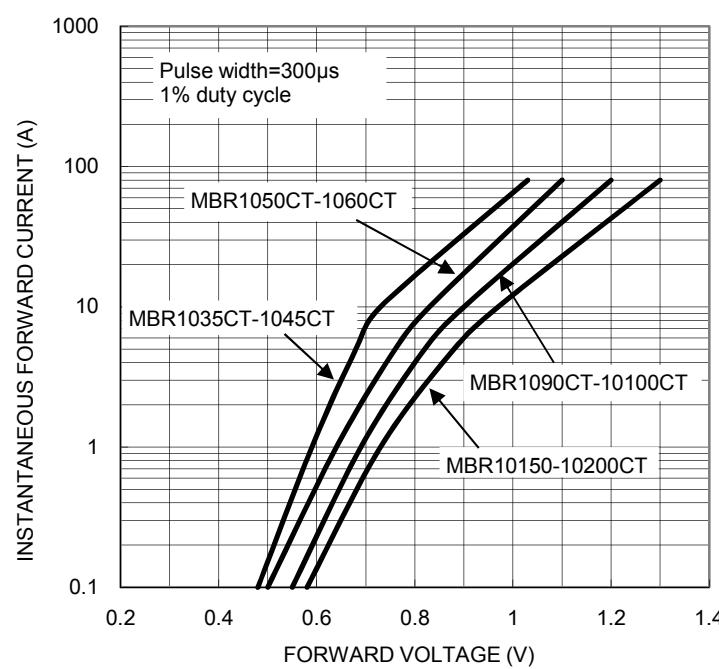


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

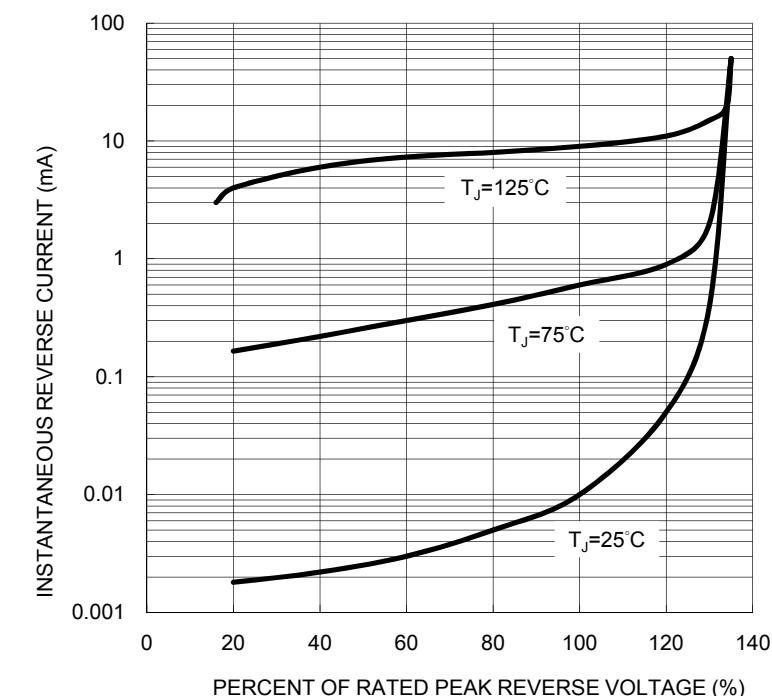


FIG. 5 TYPICAL JUNCTION CAPACITANCE

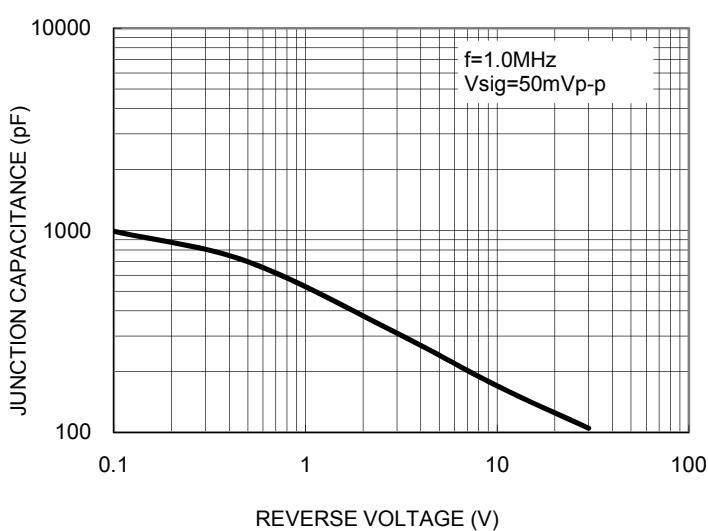
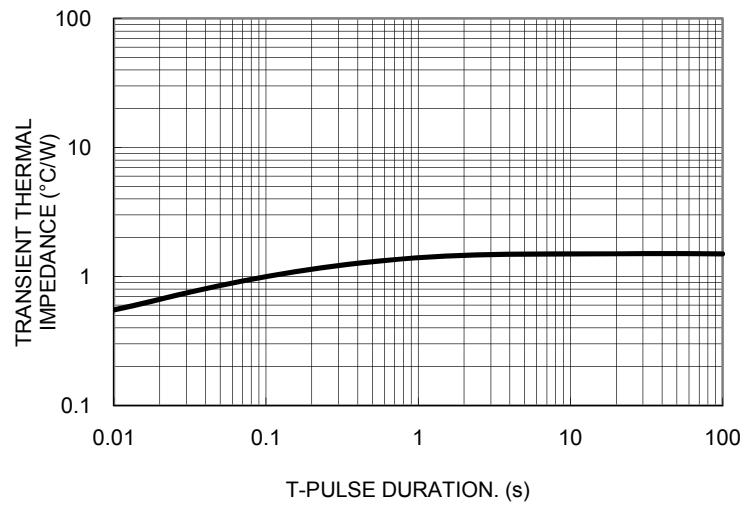
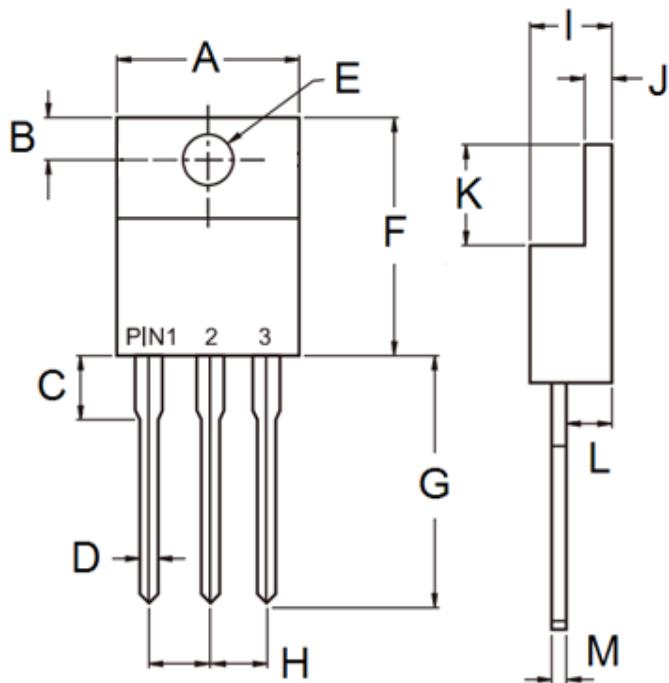


FIG. 6 TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG


PACKAGE OUTLINE DIMENSIONS
TO-220AB


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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