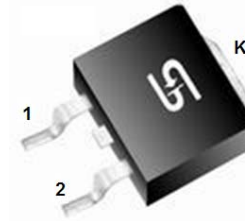


Dual Common Cathode Schottky Rectifier

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guardring for overvoltage protection
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



MECHANICAL DATA

Case: TO-263AB (D²PAK)

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

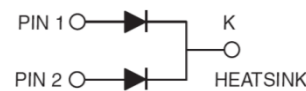
Meet JESD 201 class 1A whisker test

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

Polarity: As marked

Weight: 1.37 g (approximately)

TO-263AB (D²PAK)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)									
PARAMETER	SYMBOL	MBRS 1035 CT	MBRS 1045 CT	MBRS 1050 CT	MBRS 1060 CT	MBRS 1090 CT	MBRS 10100 CT	MBRS 10150 CT	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	35	45	50	60	90	100	150	V
Maximum RMS voltage	V _{RMS}	24	31	35	42	63	70	105	V
Maximum DC blocking voltage	V _{DC}	35	45	50	60	90	100	150	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							A
Maximum instantaneous forward voltage (Note 2) I _F = 5 A, T _J =25°C I _F = 5 A, T _J =125°C I _F = 10 A, T _J =25°C I _F = 10 A, T _J =125°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 °C T _J =100 °C T _J =125 °C	I _R	0.1 15 10 - 5							mA
Voltage rate of change (Rated V _R)	dV/dt	10000							V/μs
Typical thermal resistance	R _{θJC}	2							°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 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
MBRS10xxCT (Note 1)	Prefix "H"	RN	Suffix "G"	D ² PAK	800 / 13" Paper reel
		C0		D ² PAK	50 / Tube

Note 1: "xx" defines voltage from 35V (MBRS1035CT) to 150V (MBRS10150CT)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBRS1060CT RN	MBRS1060CT		RN		
MBRS1060CT RNG	MBRS1060CT		RN	G	Green compound
MBRS1060CTHRN	MBRS1060CT	H	RN		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

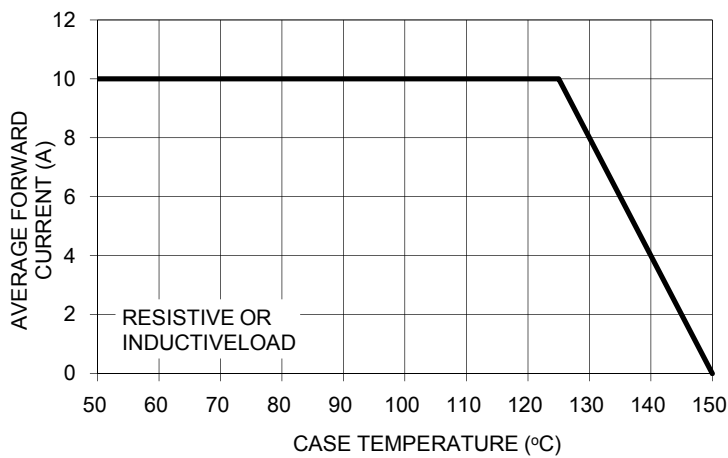


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

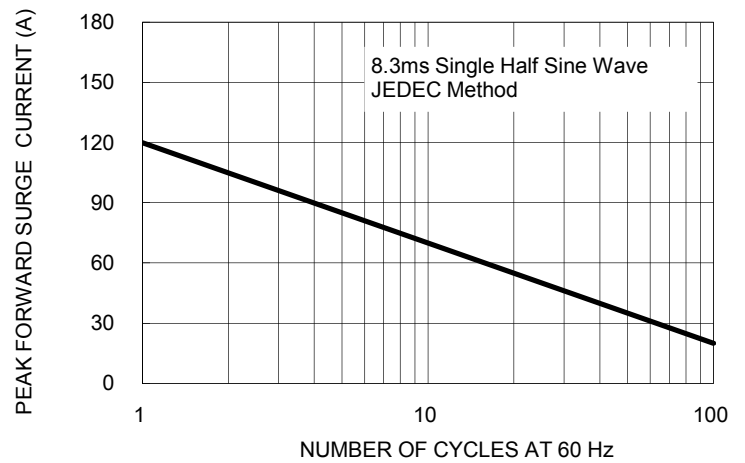


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

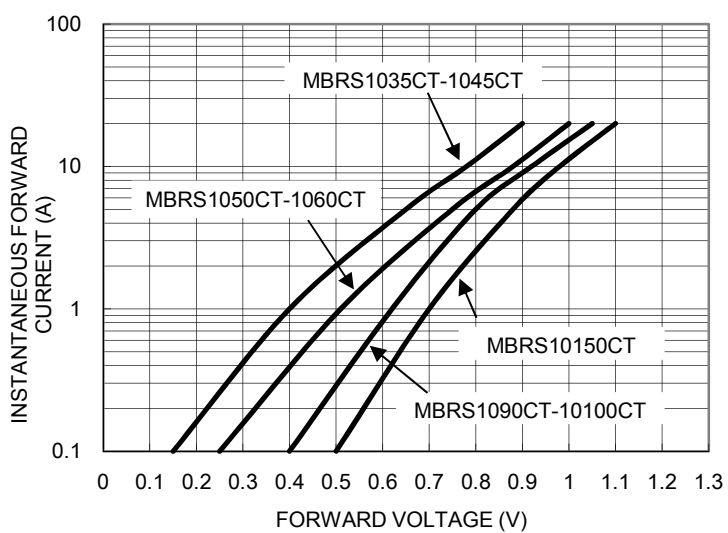


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

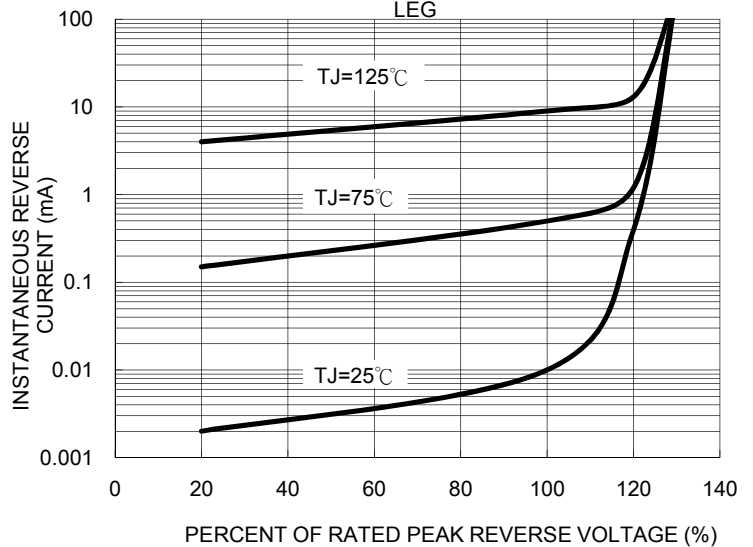


FIG. 5 TYPICAL JUNCTION CAPACITANCE

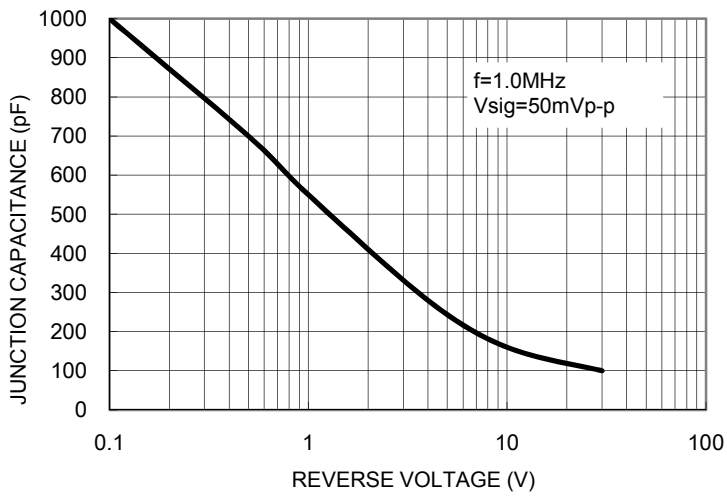
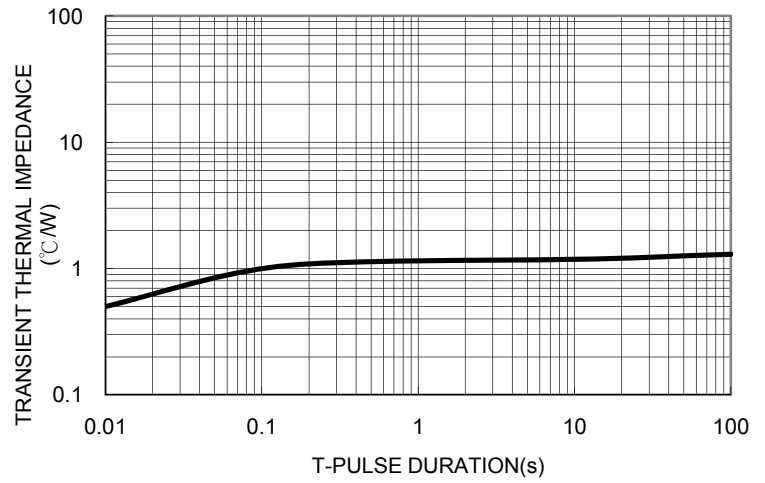
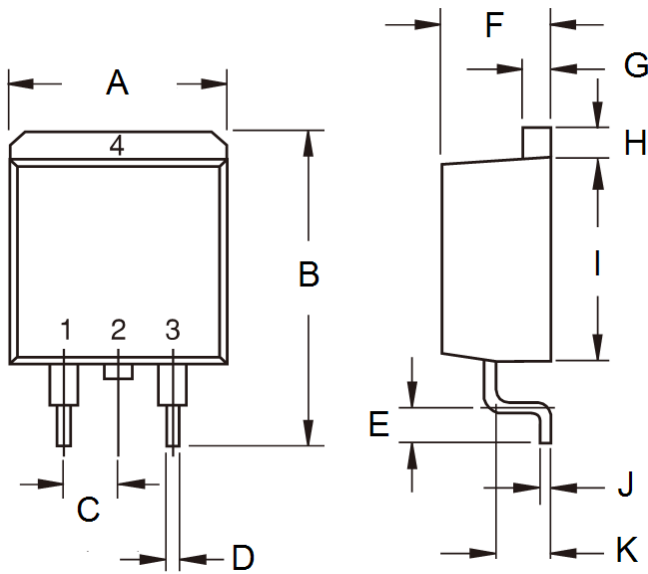


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

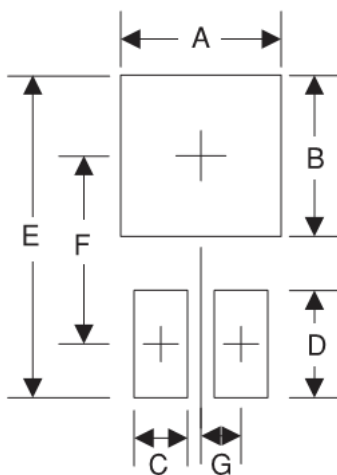


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.5	-	0.413
B	14.60	15.88	0.575	0.625
C	2.41	2.67	0.095	0.105
D	0.68	0.94	0.027	0.037
E	2.29	2.79	0.090	0.110
F	4.44	4.70	0.175	0.185
G	1.14	1.40	0.045	0.055
H	1.14	1.40	0.045	0.055
I	8.25	9.25	0.325	0.364
J	0.36	0.53	0.014	0.021
K	2.03	2.79	0.080	0.110

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	10.8	0.425
B	8.3	0.327
C	1.1	0.043
D	3.5	0.138
E	16.9	0.665
F	9.5	0.374
G	2.5	0.098

MARKING DIAGRAM



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

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