

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



I²PAK



MECHANICAL DATA

Case: I²PAK

Molding compound, UL flammability classification rating 94V-0

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

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

Meet JESD 201 class 1A whisker test

Polarity: As marked

Weight: 1.4 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	MBRI30100CT	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)}	30	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	200	A
Maximum instantaneous forward voltage (Note 2) I _F = 15 A, T _J =25°C I _F = 15 A, T _J =125°C I _F = 30 A, T _J =25°C I _F = 30 A, T _J =125°C	V _F	0.84 0.70 0.94 0.82	V
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	0.2	mA
		7.5	
Voltage rate of change (Rated V _R)	dV/dt	10000	V/μs
Typical thermal resistance	R _{θJC}	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: Pulse test with PW=300μs, 1% duty cycle

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MBRI30100CT	C0	Suffix "G"	I ² PAK	50 / Tube

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MBRI30100CT C0	MBRI30100CT	C0		
MBRI30100CT C0G	MBRI30100CT	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

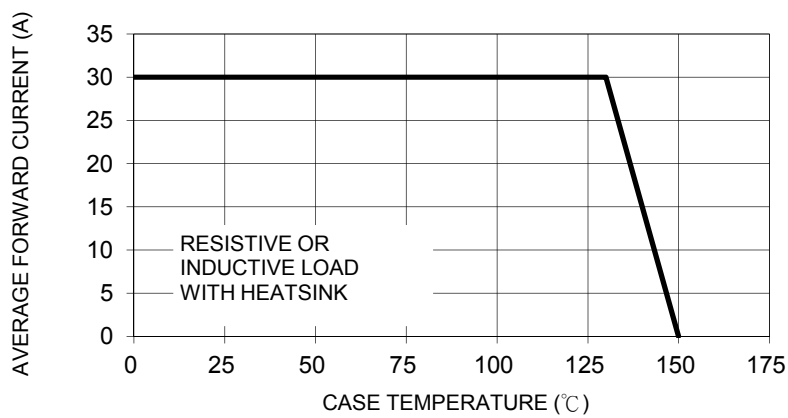


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

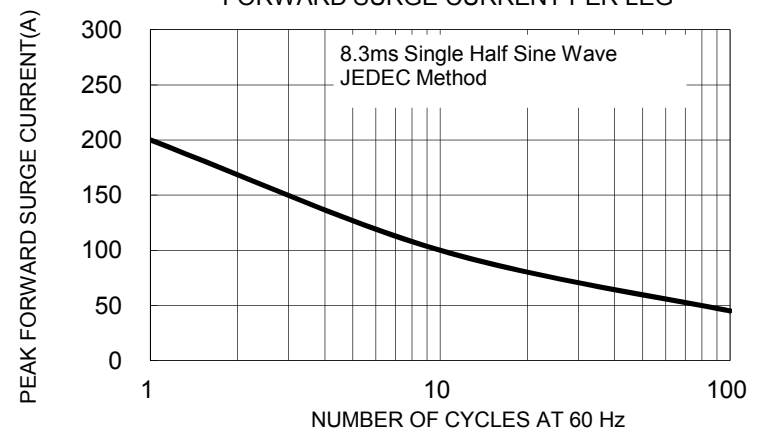


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

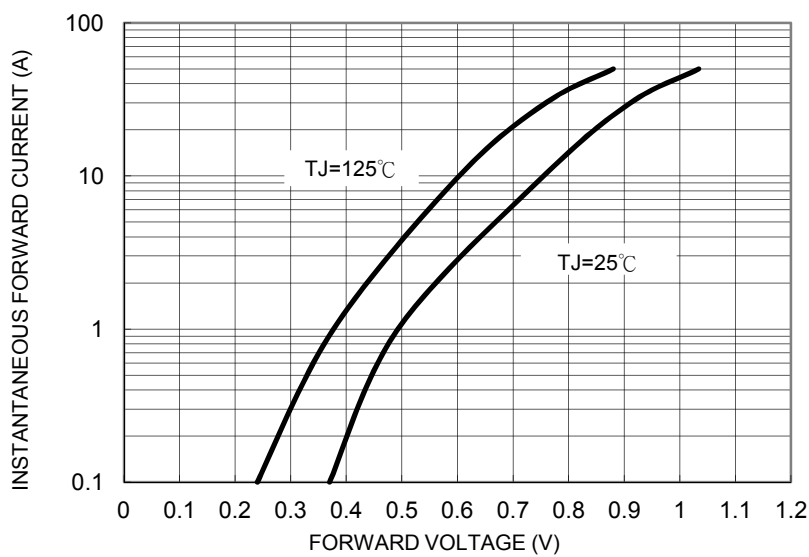


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

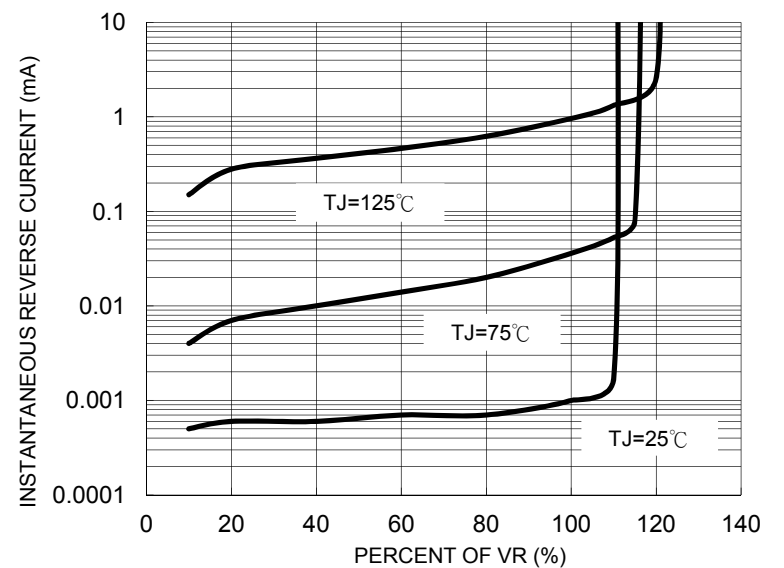


FIG. 5 TYPICAL JUNCTION CAPACITANCE
PER LEG

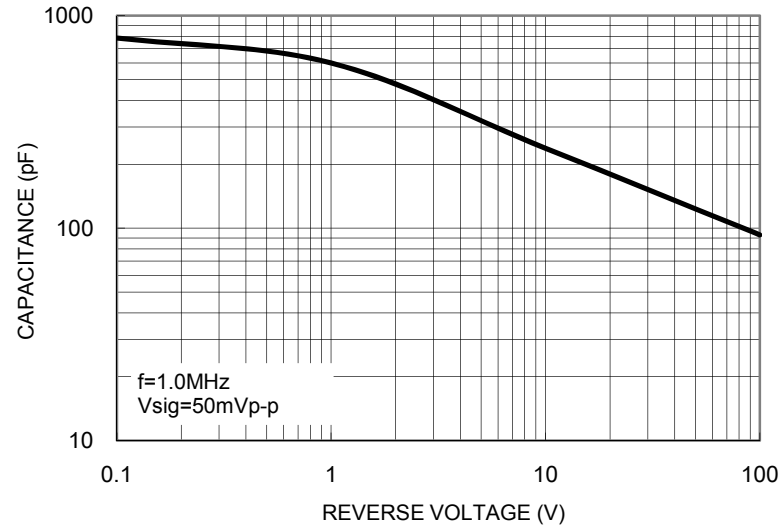
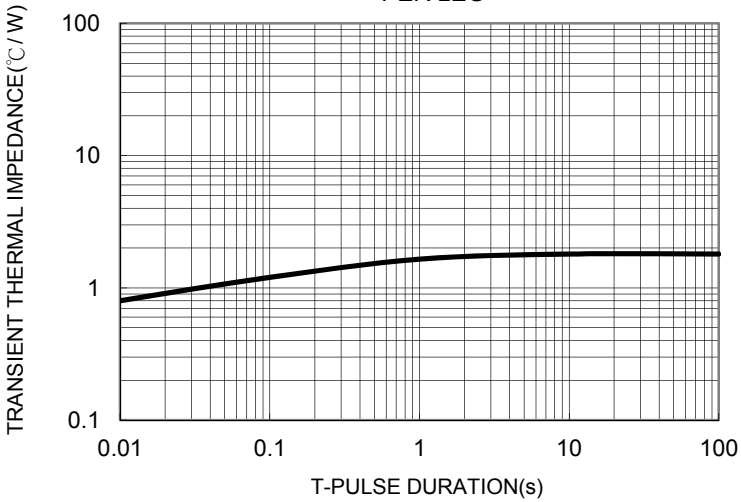
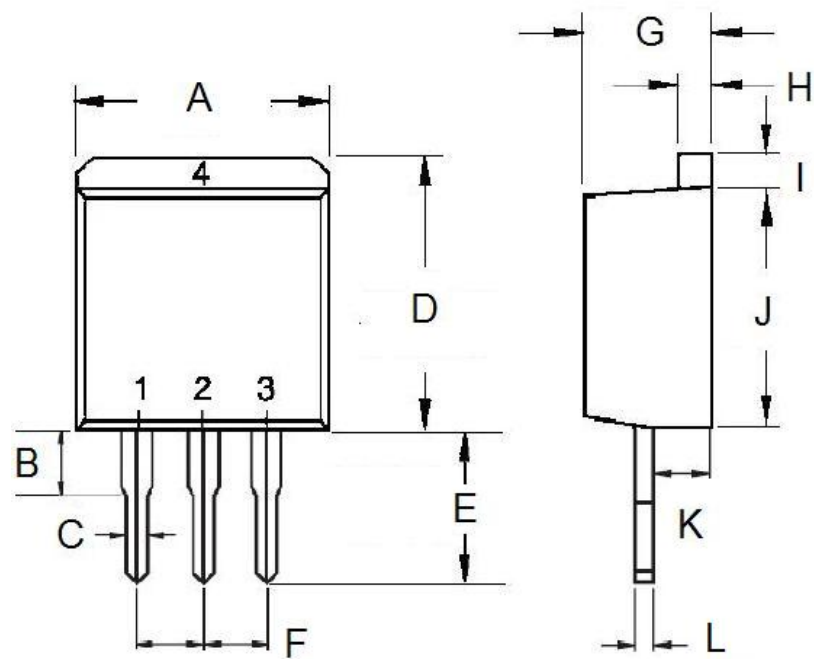


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE
PER LEG

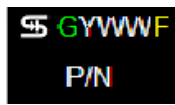


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	3.56	4.06	0.140	0.160
C	0.68	0.94	0.027	0.037
D	14.60	15.88	0.575	0.625
E	7.58	8.12	0.298	0.320
F	2.41	2.67	0.095	0.105
G	4.44	4.70	0.175	0.185
H	1.14	1.40	0.045	0.055
I	1.14	1.40	0.045	0.055
J	8.25	9.25	0.325	0.364
K	2.54	2.79	0.100	0.110
L	0.35	0.64	0.014	0.025

MARKING DIAGRAM



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

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