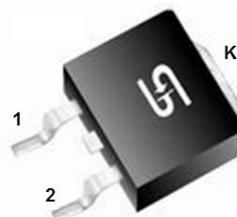


30A, 45V Dual Common Cathode Schottky Rectifier

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- 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



MECHANICAL DATA

Case: TO-263AB (D²PAK)

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

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

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

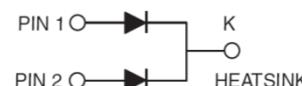
Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: As marked

Weight: 1.41 g (approximately)

TO-263AB (D²PAK)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)				
PARAMETER	SYMBOL	MBRS30H45CT		UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	45		V
Maximum RMS voltage	V_{RMS}	31		V
Maximum DC blocking voltage	V_{DC}	45		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}	220		A
Maximum instantaneous forward voltage at (Note 1) $I_F = 15\text{A}, T_J=25^\circ\text{C}$ $I_F = 15\text{A}, T_J=125^\circ\text{C}$ $I_F = 30\text{A}, T_J=25^\circ\text{C}$ $I_F = 30\text{A}, T_J=125^\circ\text{C}$	V_F	0.70 0.60 0.90 0.75		V
Maximum reverse current @ rated V_R $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	0.2 15		mA
Voltage rate of change (Rated V_R)	dV/dt	10000		$\text{V}/\mu\text{s}$
Typical thermal resistance	$R_{\theta JC}$ $R_{\theta JA}$	1.5 50		$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 to +175		$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to +175		$^\circ\text{C}$

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

ORDERING INFORMATION

PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
MBRS30H45CT	H	RN	G	D ² PAK	800 / 13" Paper reel
		MN			800 / 13" Plastic reel

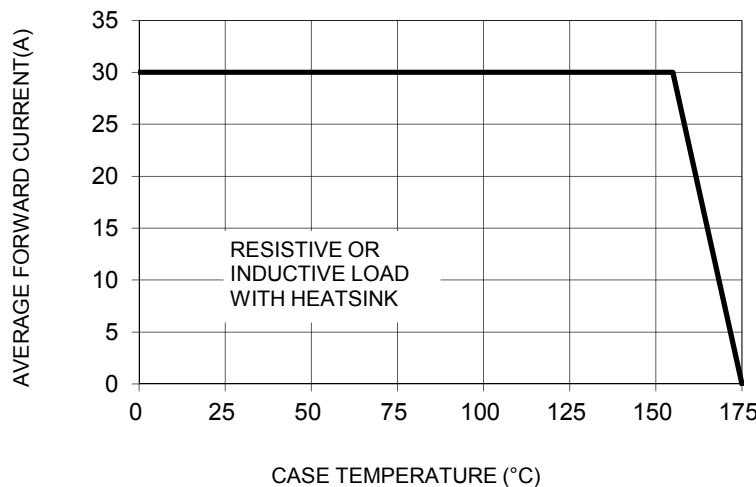
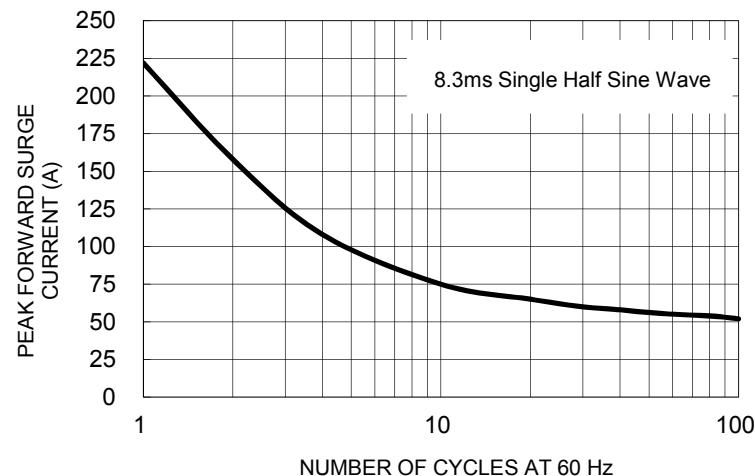
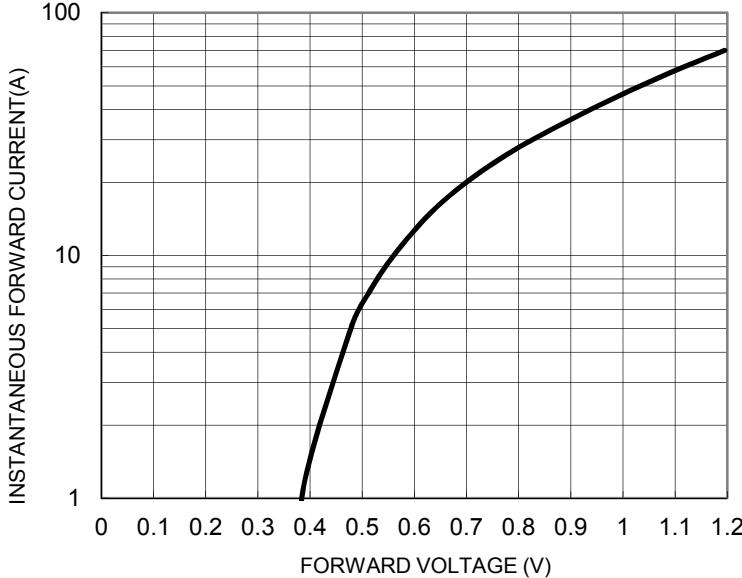
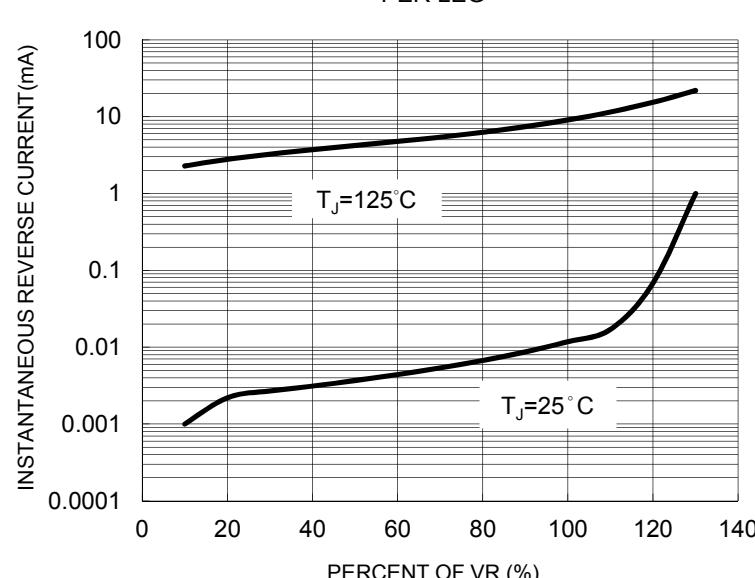
*: Optional available

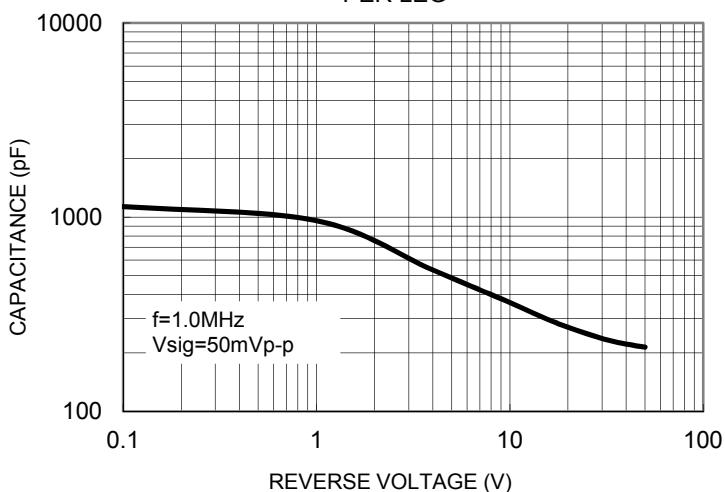
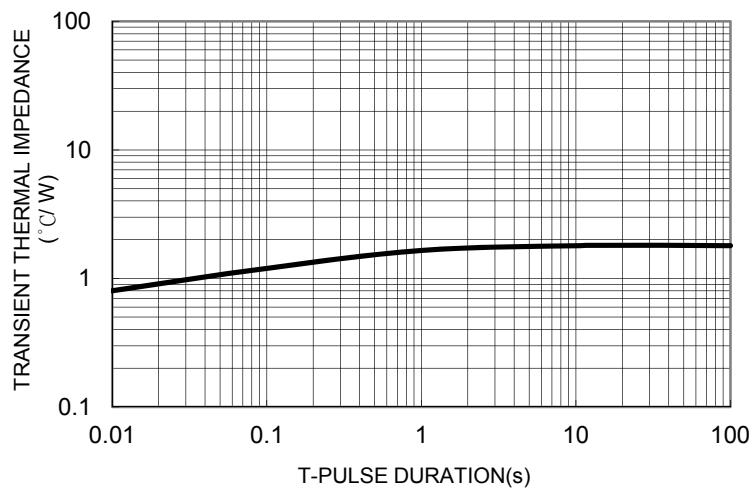
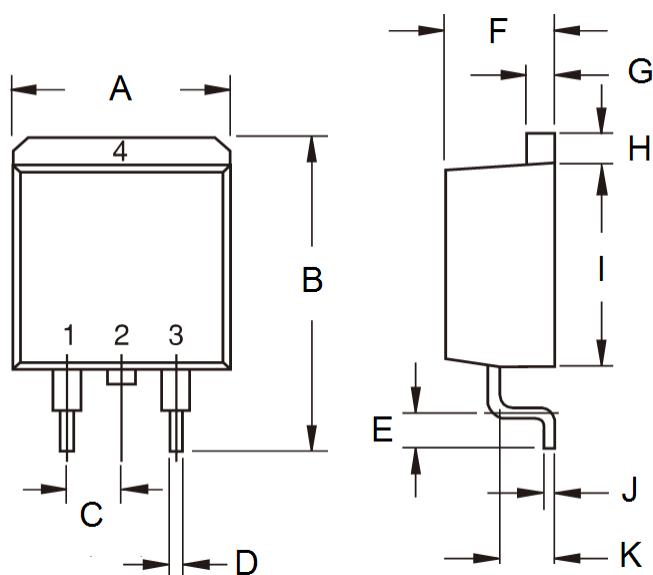
EXAMPLE

PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBRS30H45CTHRNG	MBRS30H45CT	H	RN	G	AEC-Q101 qualified Green compound

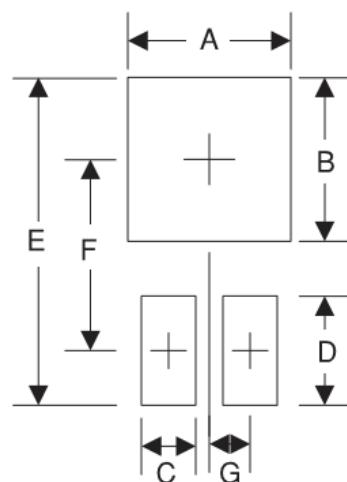
RATINGS AND CHARACTERISTICS CURVES

 (T_A=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
TO-263AB (D²PAK)


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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