

# 60A, 40V 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 (D<sup>2</sup>PAK)

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

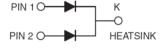
Packing code with suffix "G" means green compound (halogen-free) **Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: As marked

Weight: 1.7 g (approximately)

# TO-263AB (D<sup>2</sup>PAK)



MAXIMUM RATINGS AND ELECTRICAL CHAR	ACTERISTI	CS (T <sub>A</sub> =25°C unless otherwise noted)	
PARAMETER	SYMBOL	MBRS6040CT	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	V
Maximum RMS voltage	$V_{RMS}$	28	V
Maximum DC blocking voltage	$V_{DC}$	40	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	60	Α
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	250	А
Maximum instantaneous forward voltage (Note 1) $I_F$ = 30A, $T_J$ =25°C $I_F$ = 30A, $T_J$ =125°C $I_F$ = 60A, $T_J$ =25°C $I_F$ = 60A, $T_J$ =125°C	V <sub>F</sub>	0.75 0.70 1.05 0.98	V
$T_J$ =25°C Maximum reverse current @ rated $V_R$ $T_J$ =125°C	I <sub>R</sub>	0.1 40	mA
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000	V/µs
Typical thermal resistance	$R_{ heta JC}$	1	°C/W
Operating junction temperature range	TJ	- 55 to +150	°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150	°C

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



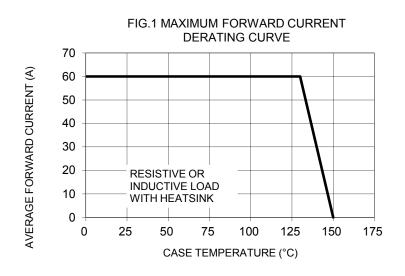
ORDERING INFORMATION					
DADT NO	PART NO.	PACKING	PACKING CODE	PACKAGE	PACKING
PART NO.	SUFFIX	CODE	SUFFIX (*)		
MBRS6040CT	н	RN	- G	D <sup>2</sup> PAK	800 / 13" Paper reel
	11	MN			800 / 13" Plastic reel

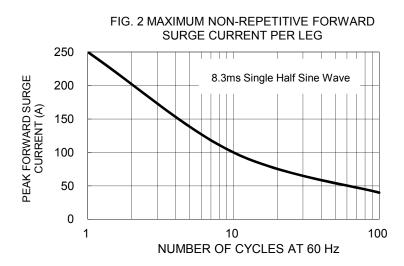
<sup>\*:</sup> Optional available

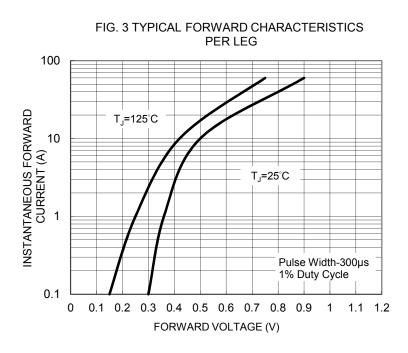
EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBRS6040CTHRNG	MBRS6040CT	Н	RN	G	AEC-Q101 qualified Green compound

#### RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub>=25°C unless otherwise noted)







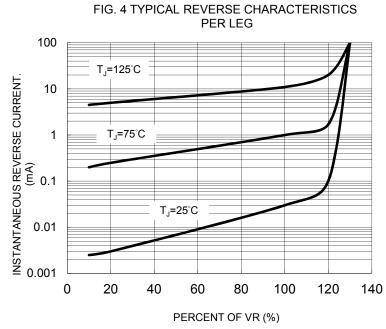




FIG. 5 TYPICAL JUNCTION CAPACITANCE

10000

1000

1000

1000

1000

0.1

1 10 100

REVERSE VOLTAGE (V)

FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

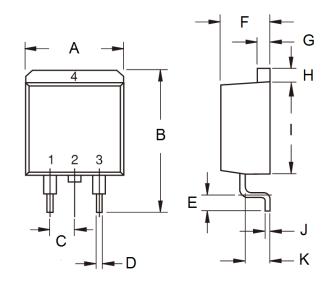
100

(M) 10

(M) 1

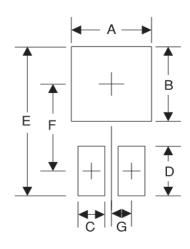
## PACKAGE OUTLINE DIMENSIONS

# TO-263AB (D<sup>2</sup>PAK)



DIM.	Unit (mm)		Unit (inch)	
DIIVI.	Min	Max	Min	Max
Α	-	10.5	-	0.413
В	14.60	15.88	0.575	0.625
С	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
Н	1.14	1.40	0.045	0.055
Ī	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)
Α	10.8	0.425
В	8.3	0.327
С	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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Document Number: DS\_D1410067 Version: F15