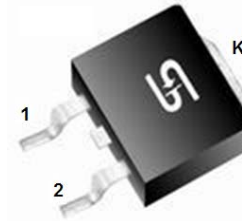


## Dual Common Cathode Schottky Rectifier

### 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 (D<sup>2</sup>PAK)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

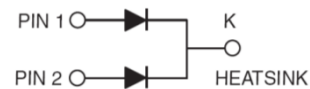
**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

**Polarity:** As marked

**Weight:** 1.37 g (approximately)

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)						
PARAMETER	SYMBOL	MBRS 1545 CT-Y	MBRS 1560 CT-Y	MBRS 15100 CT-Y	MBRS 15150 CT-Y	Unit
Marking code		MBRS 1545CT	MBRS 1560CT	MBRS 15100CT	MBRS 15150CT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	45	60	100	150	V
Maximum RMS voltage	V <sub>RMS</sub>	31	42	70	105	V
Maximum DC blocking voltage	V <sub>DC</sub>	45	60	100	150	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	15				A
Peak repetitive forward current (Rated V <sub>R</sub> , Square wave, 20KHz)	I <sub>FRM</sub>	15				A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150				A
Peak repetitive reverse surge current (Note 1)	I <sub>RRM</sub>	1	0.5			A
Maximum instantaneous forward voltage (Note 2) I <sub>F</sub> = 7.5 A, T <sub>J</sub> =25°C I <sub>F</sub> = 7.5 A, T <sub>J</sub> =125°C I <sub>F</sub> = 15 A, T <sub>J</sub> =25°C I <sub>F</sub> = 15 A, T <sub>J</sub> =125°C	V <sub>F</sub>	- 0.57 0.84 0.72	0.75 0.65 - -	0.92 0.82 - -	0.95 0.92 - -	V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	0.1				mA
		15	10	5		
Voltage rate of change (Rated V <sub>R</sub> )	dV/dt	10000				V/μs
Typical thermal resistance	R <sub>θJC</sub> R <sub>θJA</sub>	2 50				°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150				°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150				°C

Note 1: t<sub>p</sub> = 2.0 μs, 1.0KHz

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

## ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
MBRS15xxCT-Y (Note 1)	RN	G	D <sup>2</sup> PAK	800 / 13" Paper reel
	C0		D <sup>2</sup> PAK	50 / Tube

Note 1: "xx" defines voltage from 45V (MBRS1545CT-Y) to 150V (MBRS15150CT-Y)

## EXAMPLE

PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
MBRS1560CT-Y RN	MBRS1560CT-Y	RN		
MBRS1560CT-Y RNG	MBRS1560CT-Y	RN	G	Green compound

## RATINGS AND CHARACTERISTICS CURVES

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

FIG. 1 FORWARD CURRENT DERATING CURVE

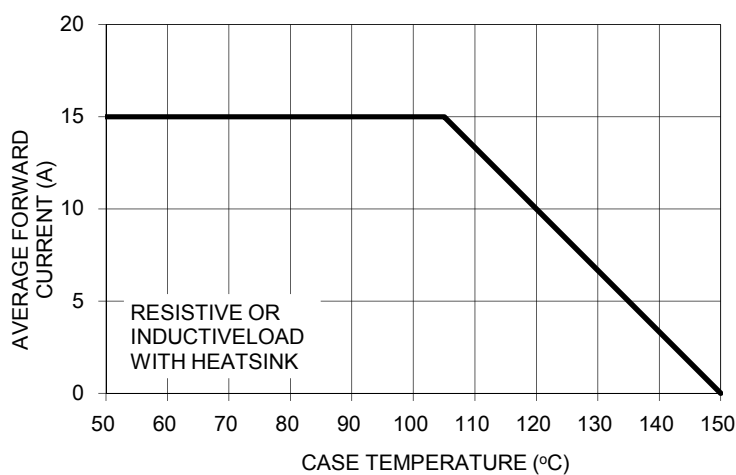


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

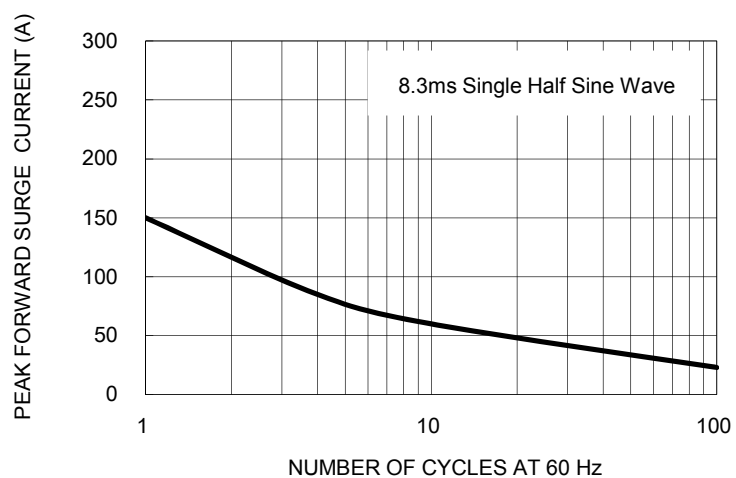


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

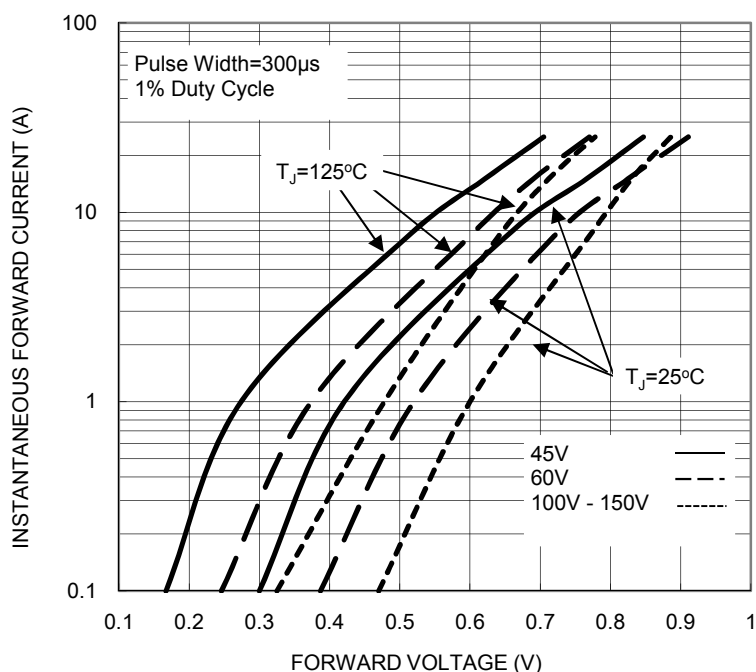


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

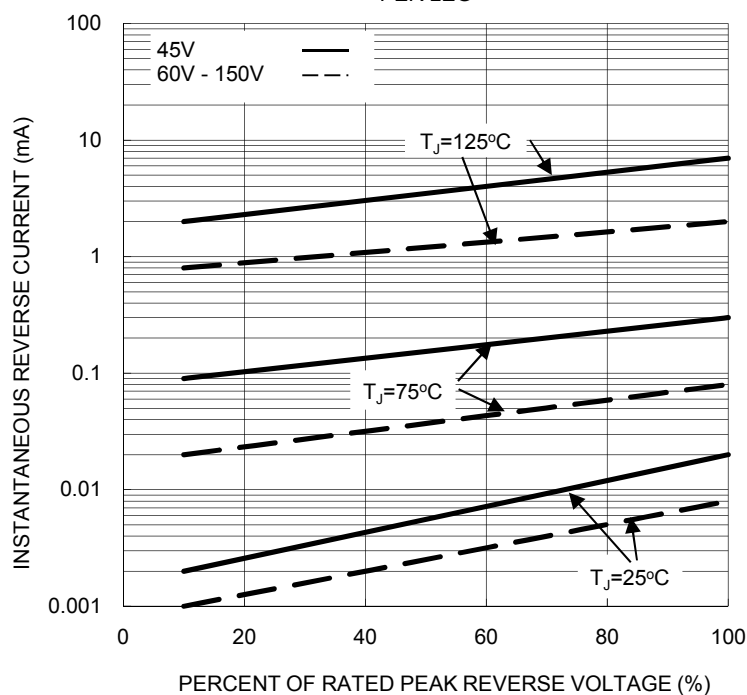


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

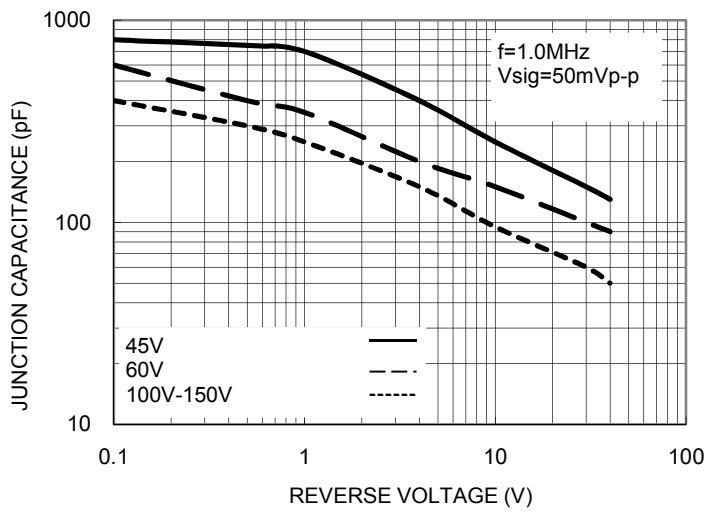
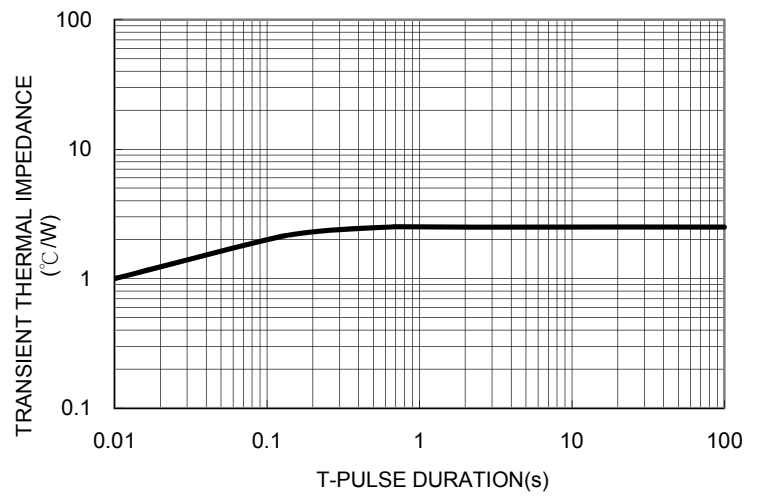
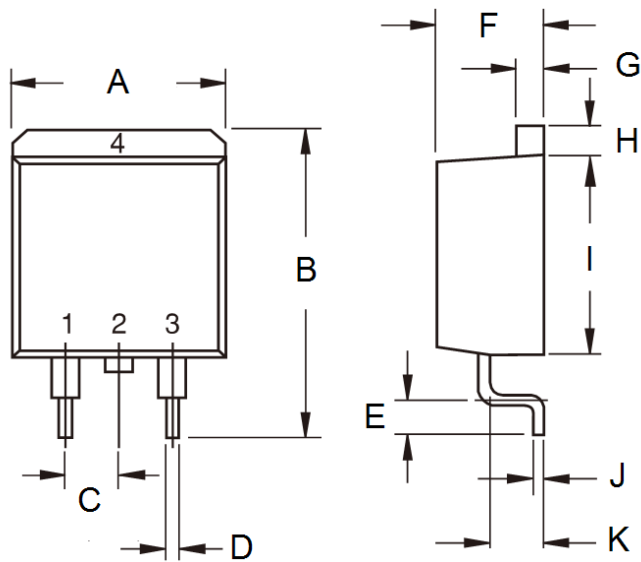


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

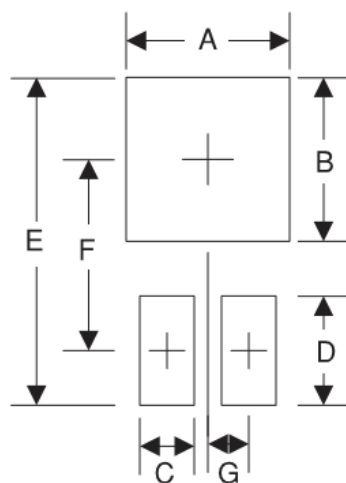


PACKAGE OUTLINE DIMENSIONS  
**TO-263AB (D<sup>2</sup>PAK)**



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 = Marking Code  
G = Green Compound  
YWW = Date Code  
F = Factory Code

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