

# 5A, 600V Surface Mount Ultra Fast Rectifier

#### **FEATURES**

- Ideal for automated placement
- High efficiency, low VF
- High surge current capability
- High reliability
- Low power loss
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



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

HEATSINK





### 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 Par

Mee

Pola

Weight: 1.33 g (approximately)

Disture sensitivity level: level 1, per J-STD-020
rt no. with suffix "H" means AEC-Q101 qualified
cking code with suffix "G" means green compound (halogen-free)
erminal: Matte tin plated leads, solderable per JESD22-B102
eet JESD 201 class 2 whisker test
plarity: As marked

MAXIMUM RATINGS AND ELECTRICAL CHAR	RACTERISTICS (	T <sub>A</sub> =25°C unless otherwise noted)	
PARAMETER	SYMBOL	UGS5J	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
Maximum RMS voltage	V <sub>RMS</sub>	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	5	А
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	65	А
Maximum instantaneous forward voltage $T_J$ =25°C $I_F$ =5A $T_J$ =125°C	V <sub>F</sub>	2.0 1.8	V
Maximum reverse current @ rated $V_R$ $T_J=25^{\circ}C$ $T_J=125^{\circ}C$	I <sub>R</sub>	20 250	μΑ
Maximum reverse recovery time (Note 1)	t <sub>rr</sub>	20	ns
Typical thermal resistance	$R_{ heta JC}$	3	°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: Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A





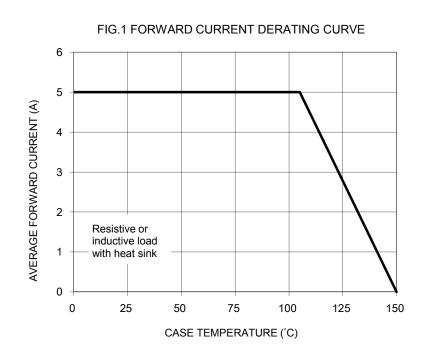
ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX <sup>(*)</sup>	PACKAGE	PACKING
UGS5J	Н	RN	G	D <sup>2</sup> PAK	800 / 13" Paper reel
		MN			800 / 13" Plastic reel

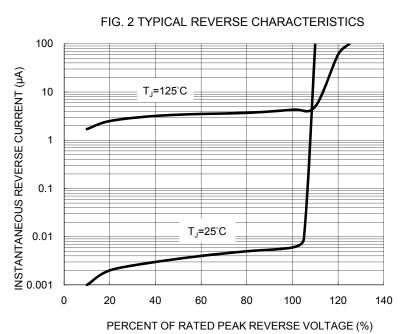
<sup>\*:</sup> Optional available

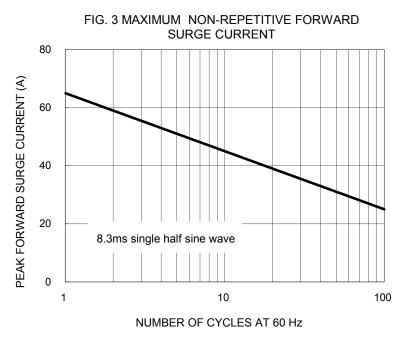
EXAMPLE					
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
UGS5JHRNG	UGS5J	Ħ	RN	G	AEC-Q101 qualified Green compound

### RATINGS AND CHARACTERISTICS CURVES

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







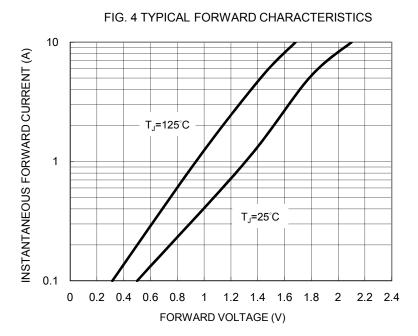
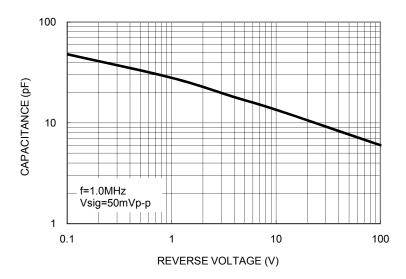


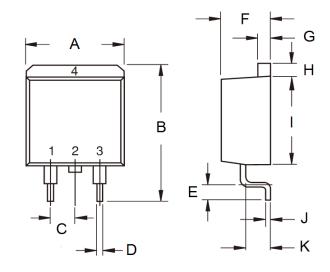


FIG. 5 TYPICAL JUNCTION CAPACITANCE



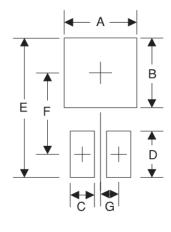
### PACKAGE OUTLINE DIMENSIONS

## 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
Е	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
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)
А	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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