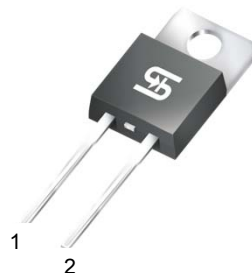


15A, 1200V Ultrafast Power Rectifier

FEATURES

- Ultrafast, soft recovery characteristics
- High junction temperature up to 175°C
- Negligible leakage sustain the high operation temperature
- Planar passivated for voltage ruggedness and reliability
- Very low stored charge and its soft recovery minimize ringing and electronical noise to reduce power loss in associated MOSFET or IGBT
- High capability for high di/dt operation.
- 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
- AEC-Q101 qualified



TO-220AC



TYPICAL APPLICATIONS

Ideal solution used as freewheeling diodes , features extremely low peak recovery current helping to significantly reduce snubbing, and lower switching losses in IGBT, especially as heavy duty applications demanding long term reliability.

Such as inverters , Uninterrupted Power Supply, motor drive and other mission-critical systems

where the high frequency and high efficiency is needed.

The series with negligible leakage, is an immediately competitive advantage for high temperature environment.

MECHANICAL DATA

Case: TO-220AC

Molding compound, UL flammability classification rating 94V-0
Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD 22-B102
Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 0.56 Nm

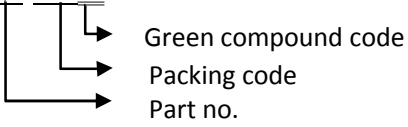
Weight: 1.7g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)				
PARAMETER	SYMBOL	UGA15120		UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	1200		V
Maximum average forward rectified current	I _{F(AV)}	15		A
Non-repetitive peak forward surge current 8.3ms single sine-wave	I _{FSM}	200		A
Maximum instantaneous forward voltage (Note 1) I _F = 15 A	V _F	2.9		V
Maximum reverse current @ Rated VR T _J =25 °C T _J =125 °C	I _R	TYP	MAX	μA
		1	5	
		5	100	
Reverse Recovery Time T _J =25 °C, I _F =0.5A, I _R =1A, I _{RR} =0.25A T _J =25 °C, I _F =1A, di _F /dt= -100A/μs, V _R =30V	t _{rr}	TYP	MAX	ns
		48	58	
		-	65	
Typical thermal resistance	R _{θJC}	2		°C/W
Operating junction temperature range	T _J	- 55 to +175		°C
Storage temperature range	T _{STG}	- 55 to +175		°C

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

ORDER INFORMATION (EXAMPLE)

UGA15120 C0G



RATINGS AND CHARACTERISTICS CURVES

($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG. 1- FORWARD CURRENT DERATING CURVE

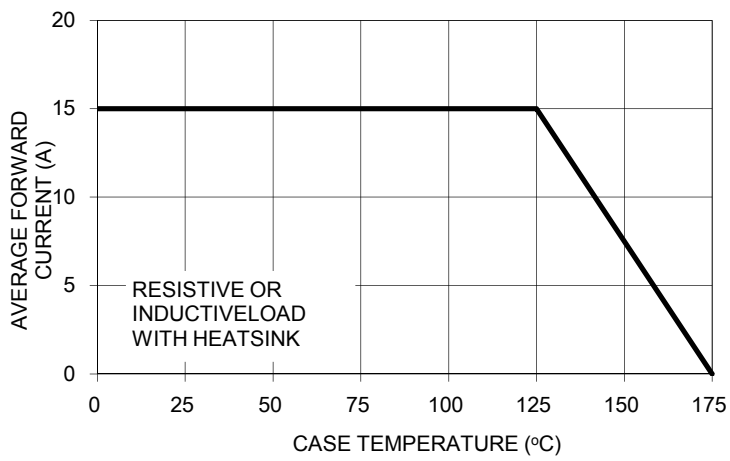


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

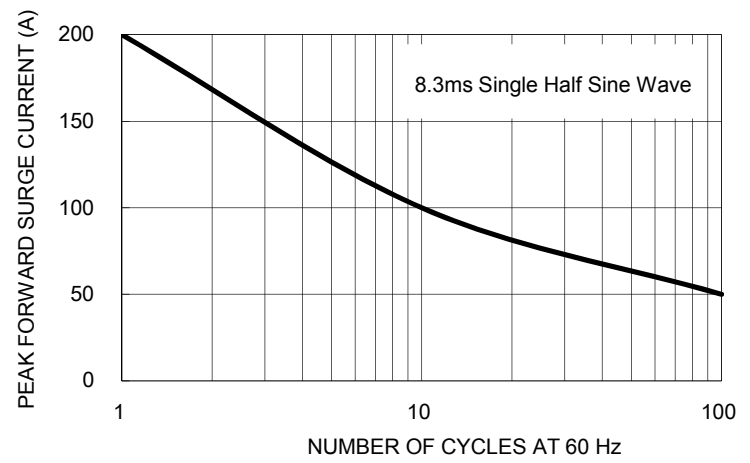


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

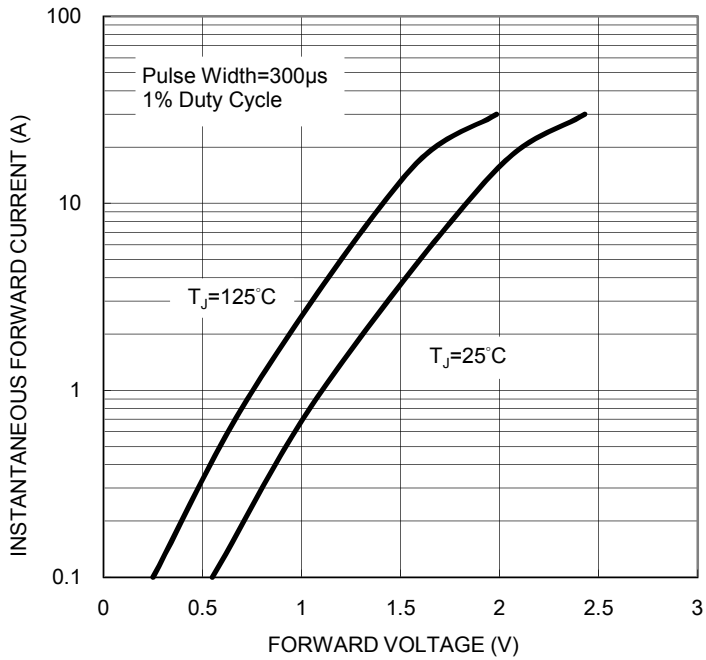


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

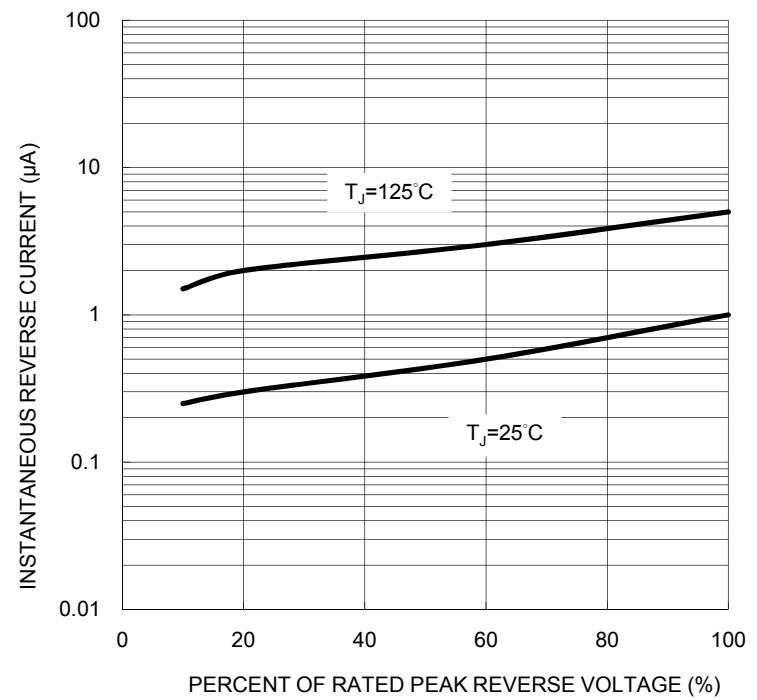
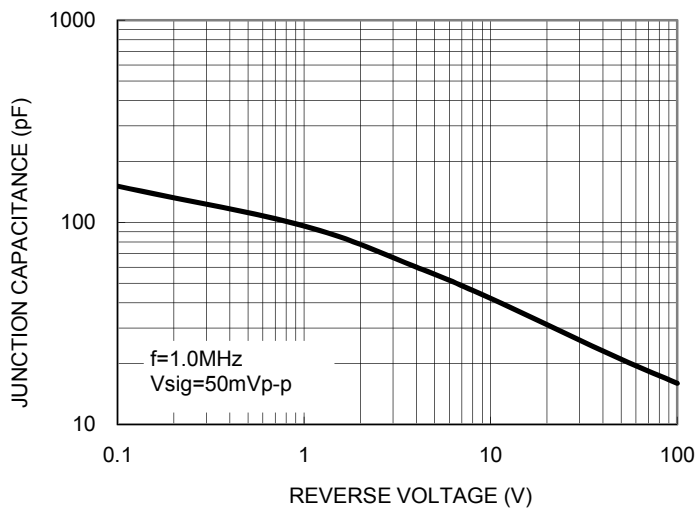
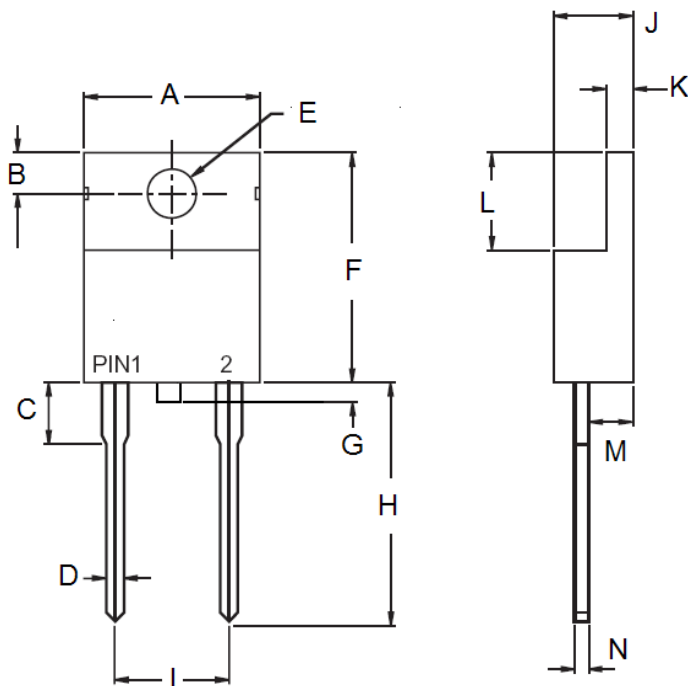


FIG. 5- TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS
TO-220AC



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.62	3.44	0.103	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	0.00	1.60	0.000	0.063
H	13.19	14.79	0.519	0.582
I	4.95	5.20	0.195	0.205
J	4.42	4.76	0.174	0.187
K	1.14	1.40	0.045	0.055
L	5.84	6.86	0.230	0.270
M	2.20	2.80	0.087	0.110
N	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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