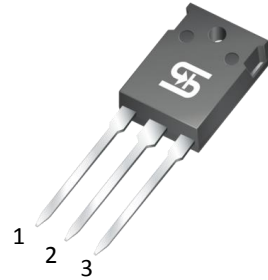


20A, 200V High Power Density Ultra Fast Rectifier

FEATURES

- Dual rectifier construction, positive center-tap
- Ultrafast recovery time
- Low reverse recovery current
- Low forward voltage
- Reduces switching losses
- Reduces conduction losses
- Low thermal resistance ideal solution for high operation temperature
- 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-247AD (TO-3P)

Molding compound, UL flammability classification rating 94V-0

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

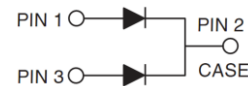
Meet JESD 201 class 2 whisker test

Polarity: As marked

Mounting torque: Maximum 1.13 Nm (10 lbf-in)

Weight: 6.1g (approximately)

TO-247AD (TO-3P)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	UG2004PT	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	200	V
Maximum RMS voltage	V _{RMS}	140	V
Maximum DC blocking voltage	V _{DC}	200	V
Maximum average forward rectified current	I _{F(AV)}	20	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	200	A
Maximum instantaneous forward voltage (Note 1) I _F = 10 A	V _F	0.93	V
Maximum reverse current @ rated VR	I _R	200	μA
Maximum reverse recovery time (Note 2)	t _{rr}	25	ns
Typical thermal resistance	R _{θJC}	1.5	°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

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
UG2004PT	H	C0	G	TO-247AD (TO-3P)	30 / Tube

*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
UG2004PTH0G	UG2004PT	H	C0	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

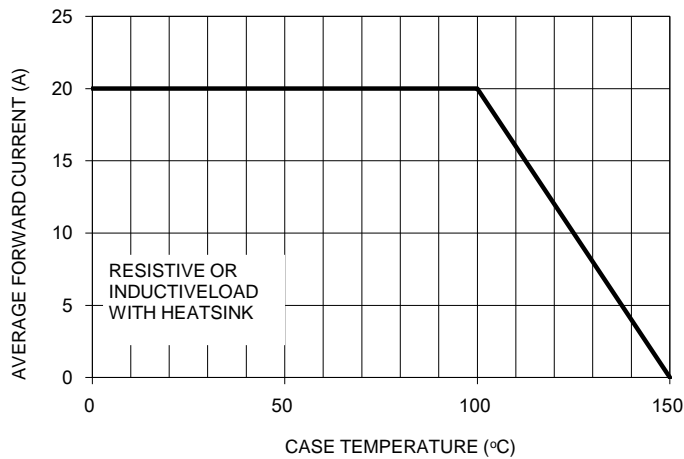


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

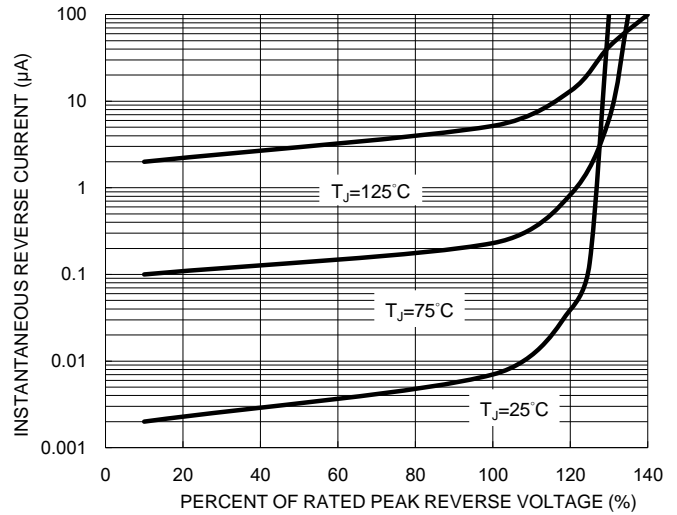


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

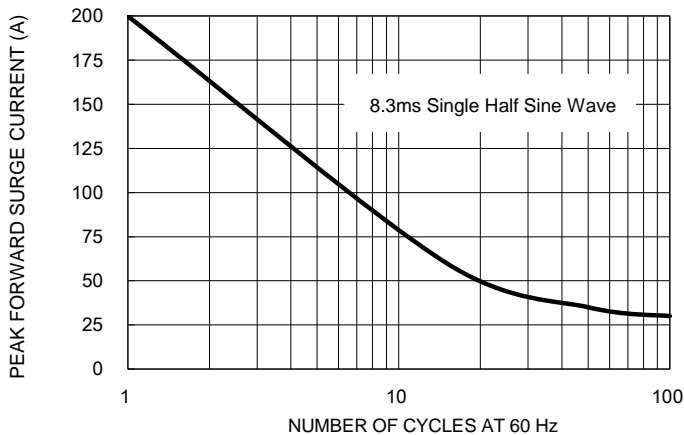


FIG. 4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

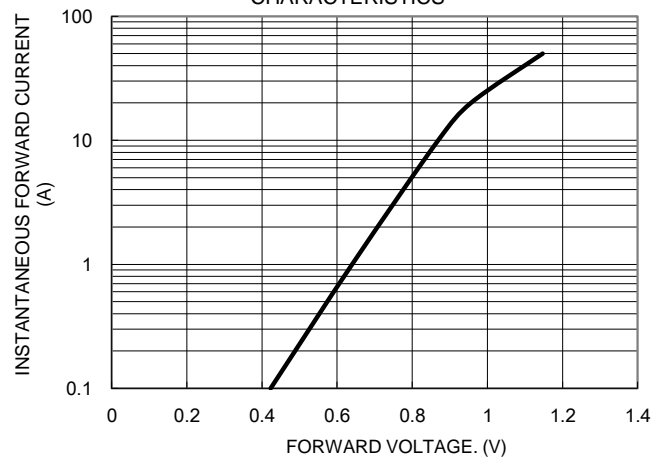


FIG. 5 TYPICAL JUNCTION CAPACITANCE

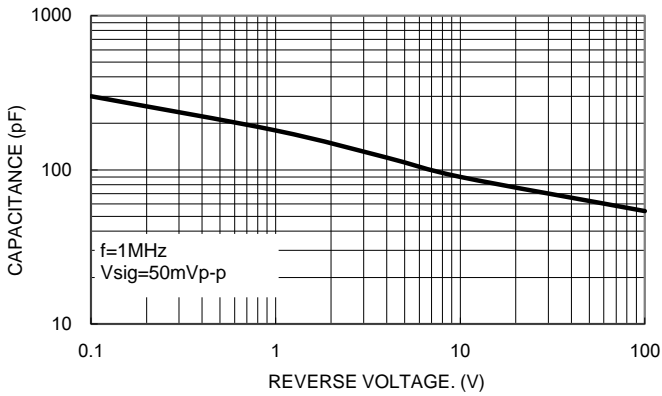
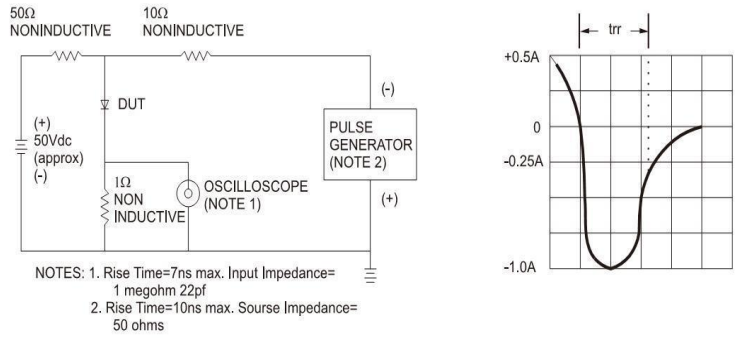
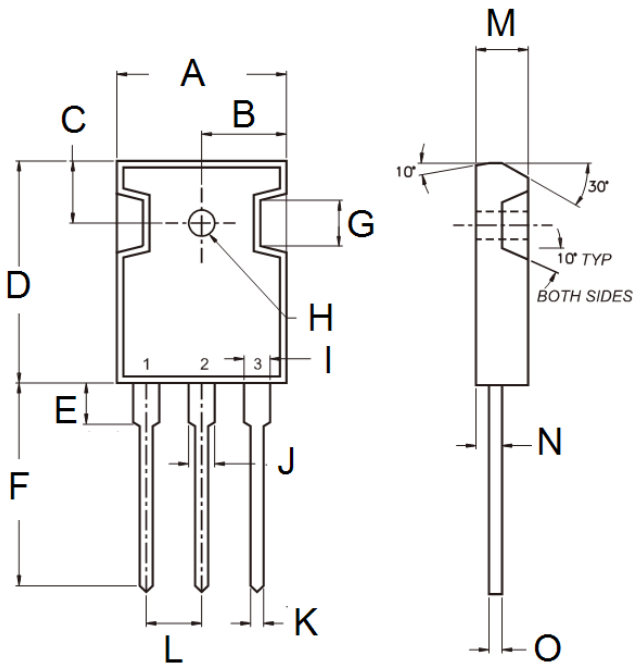


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



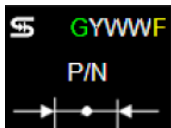
PACKAGE OUTLINE DIMENSIONS

TO-247AD (TO-3P)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	15.90	16.40	0.626	0.646
B	7.90	8.20	0.311	0.323
C	5.70	6.20	0.224	0.244
D	20.80	21.30	0.819	0.839
E	3.50	4.10	0.138	0.161
F	19.70	20.20	0.776	0.795
G	-	4.30	-	0.169
H	2.90	3.40	0.114	0.134
I	1.93	2.18	0.076	0.086
J	2.97	3.22	0.117	0.127
K	1.12	1.22	0.044	0.048
L	5.20	5.70	0.205	0.224
M	4.90	5.16	0.193	0.203
N	2.70	3.00	0.106	0.118
O	0.51	0.76	0.020	0.030

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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