20A, 200V - 600V Isolated Glass Passivated Super Fast Rectifiers

FEATURES

- High efficiency, low VF
- High current capability
- High reliability
- High surge current capability
- 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

ITO-220AB

MECHANICAL DATA

Case: ITO-220AB

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: 5 in-lbs maximum

Weight: 1.7 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	SFF 2004 GA	SFF 2005 GA	SFF 2006 GA	SFF 2008 GA	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	200	300	400	600	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}	150				A
Maximum instantaneous forward voltage (Note 1) I_F= 10 A	V_F	0.975	1.3		1.7	V
Maximum reverse current @ rated V_R T_J=25°C	I_R	10				μA
Maximum reverse current @ rated V_R T_J=125°C	I_R	400				μA
Maximum reverse recovery time (Note 2)	t_{rr}	35				ns
Typical junction capacitance (Note 3)	C_J	90				pF
Typical thermal resistance	$R_{\theta JC}$	3.1				°C/W
Operating junction temperature range	T_J	- 55 to +150				°C
Storage temperature range	T_{STG}	- 55 to +150				°C

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle

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

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
SFF200xGA (Note 1)	H	C0	G	ITO-220AB	50 / Tube

Note 1: "xx" defines voltage from 200V (UGF2004GA) to 600V (UGF2008GA)

*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SFF2004GAHC0G	SFF2004GA	H	C0	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

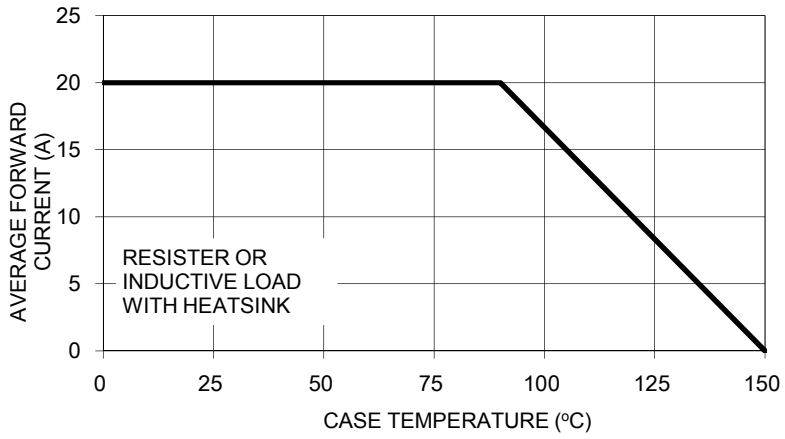


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

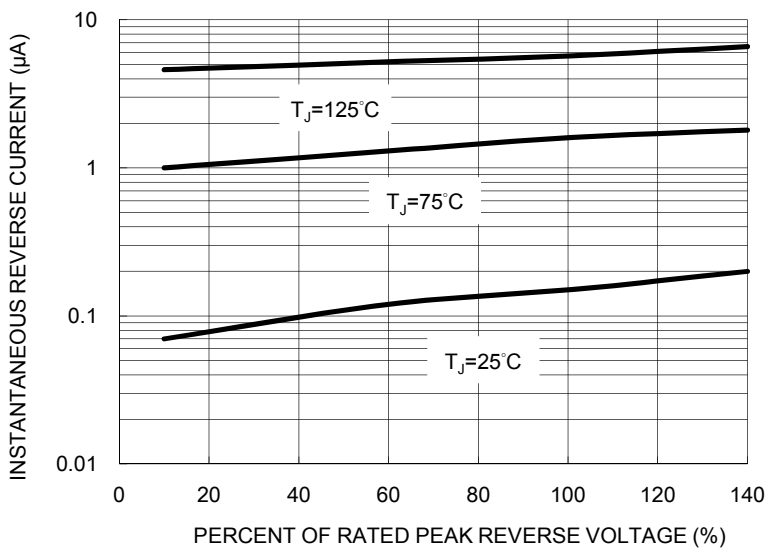


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

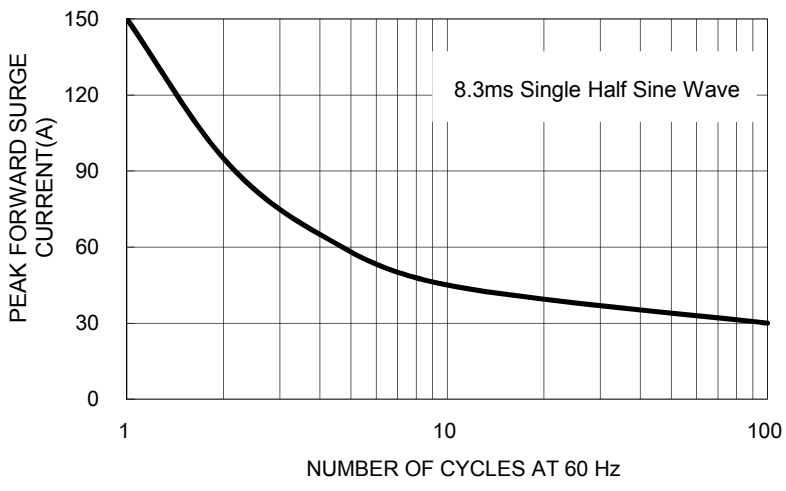


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

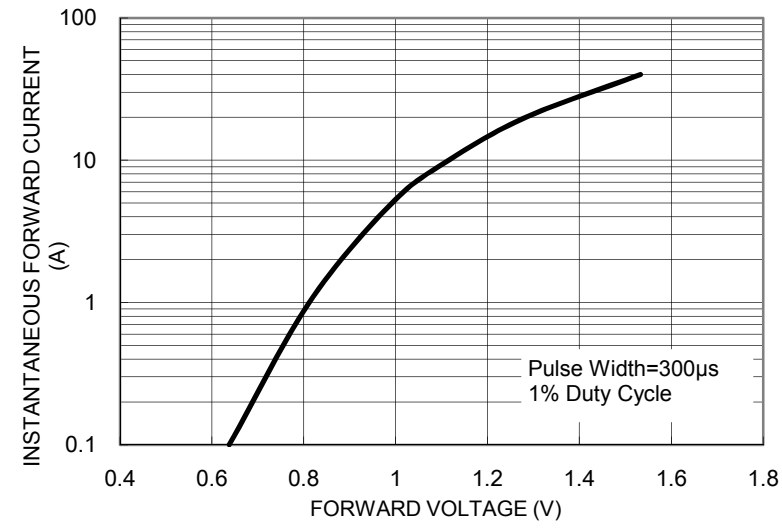


FIG. 5 TYPICAL JUNCTION CAPACITANCE

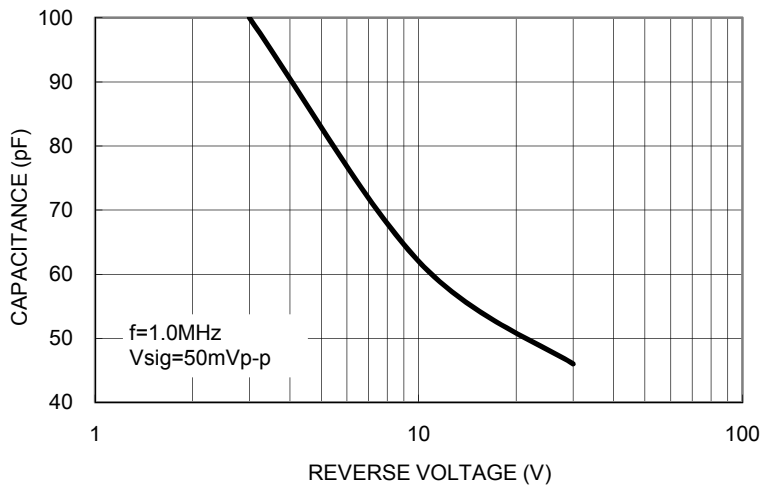
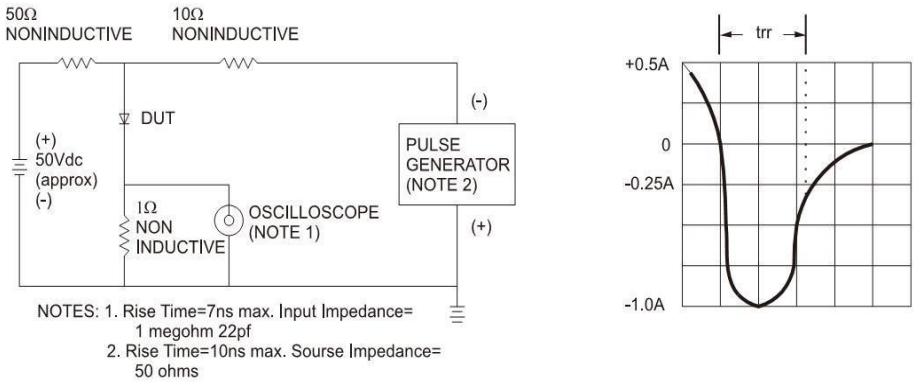
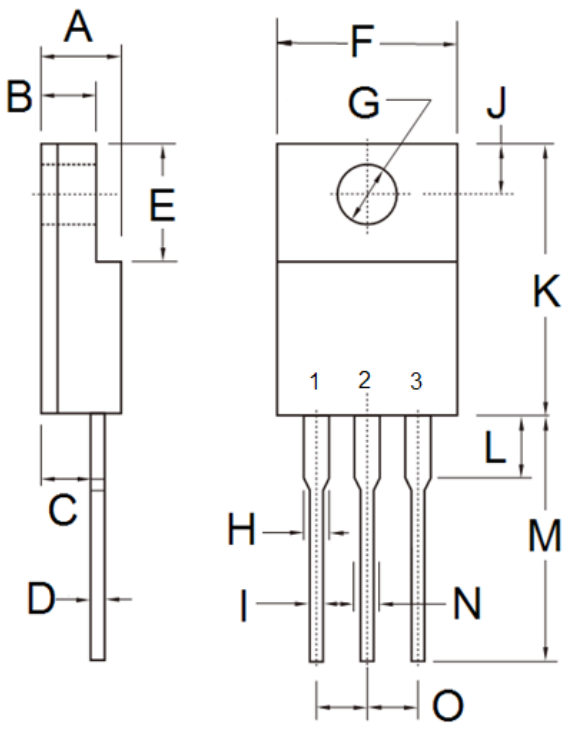


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE OUTLINE DIMENSIONS

ITO-220AB



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.16	0.098	0.124
C	2.30	2.96	0.091	0.117
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.95	1.45	0.037	0.057
I	0.50	0.90	0.020	0.035
J	2.40	3.20	0.094	0.126
K	14.80	15.50	0.583	0.610
L	-	4.10	-	0.161
M	12.60	13.80	0.496	0.543
N	-	1.80	-	0.071
O	2.41	2.67	0.095	0.105

MARKING DIAGRAM

P/N = Specific Device Code
G = Green Compound
YWW = Date Code
F = Factory Code

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