WEE Technology Company Limited

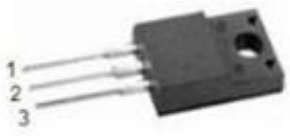
Ultra-Fast Recovery Rectifiers

SF2005 THRU SF2060

VOLTAGE RANGE 50 to 600 Volts
CURRENT 20.0 Ampere

FEATURES

- Super Fast switching speed for high efficiency
- Plastic package has Underwrites Laboratory
- High surge current capability
- Glass passivated chip junction
- Flammability Classification 94V-0
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- High temperature soldering guaranteed:250℃/10 seconds



ITO-220AB

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

- Case: ITO-220AB
- Molding compound, UL flammability classification rating 94V-0
- Terminal: Matte tin plated leads, solderable per JESD22-B102
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Mounting torque: 5 in-lbs maximum
- Weight: 1.7 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25℃ ambient temperature unless otherwise specified.
- Single phase, half wave, 60Hz, resistive or inductive load.
- For capacitive load derate current by 20%.

TYPE NUMBER	SYMBOLS	SF2005	SF2010	SF2015	SF2020	SF2030	SF2040	SF2060	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum average forward rectified current	$I_{(AV)}$	20							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	175							Amps
Maximum Instantaneous Forward Voltage @ 10.0A (Note 1)	V_F	0.95				1.25		1.70	Volts
Maximum DC Reverse Current at rated DC Blocking voltage per element T_A=25℃	I_R	5							μA
Maximum DC Reverse Current at rated DC Blocking voltage per element T_A=125℃	I_R	100							μA
Maximum Reverse Recovery Time Test conditions I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	T_{rr}	35							nS
Typical Thermal Resistance	$R_{\theta JA}$	45							℃/W
Operating Junction Temperature Range	T_J	(-55 to +150)							℃
Storage Tempetature Rang	T_{STG}	(-55 to +150)							℃

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

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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

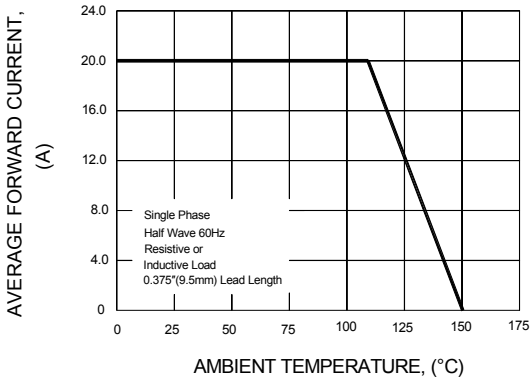


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

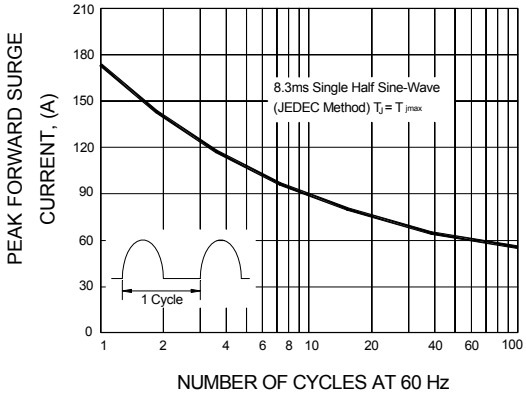


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

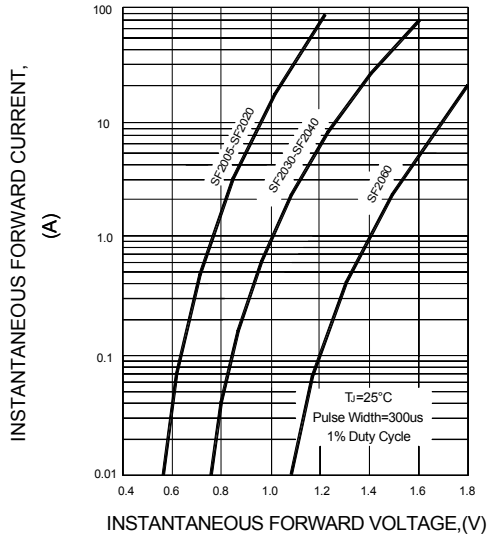
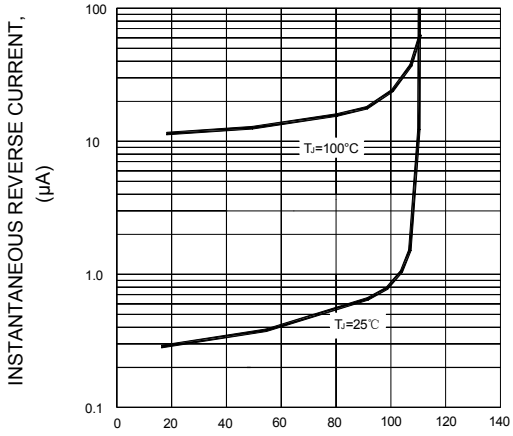
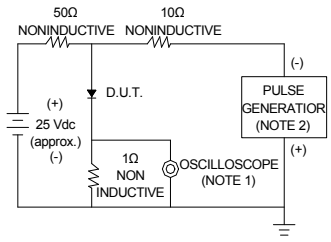
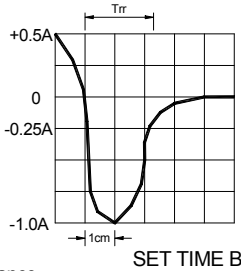


FIG.4-TYPICAL REVERSE CHARACTERISTICS



F1G.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC





SET TIME BASE FOR 50/100ns/cm

NOTES : 1.Rise Time=7ns max. Input Impedance= 1 magohm. 22pF
2.Rise time=10ns max. Source Impedance= 50 ohms

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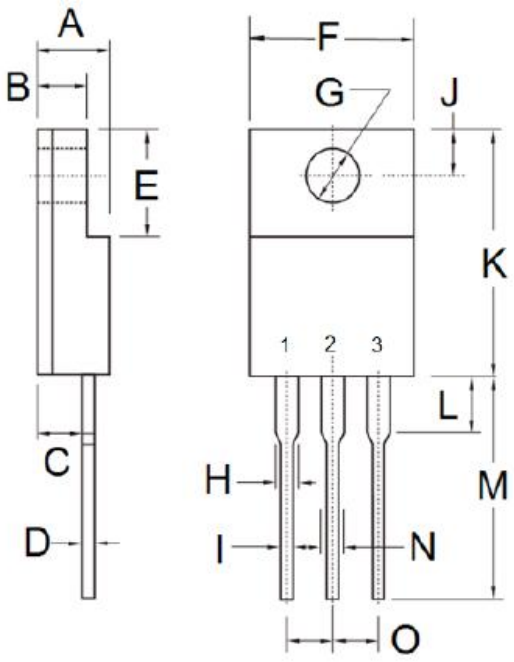
ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
SF20xx (Note 1)	Prefix "H"	C0	Suffix "G"	ITO-220AB	50 / Tube

Note 1: "xx" defines voltage from 50V (SF2005) to 600V (SF2060)

PACKAGE OUTLINE DIMENSIONS



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

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.