

8A, 600V Isolated Ultra Fast Rectifier

FEATURES

- Especially suited as boost diode on continuous mode power factor correctors
- Ideal Solution for hard switching condition
- High capability for high di/dt operation.
- Downsizing of mosfet and heatsink
- 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

DESCRIPTION

Especially suited as free wheeling or boost diode in continuous mode power factor correctors and other power switching applications. The low stored charge and ultrafast soft recovery minimizes ringing and electrical noise in power switching circuits. The family drastically cuts losses in the associated MOSFET when run at high d_{IF}/dt .

MECHANICAL DATA

Case: ITO-220AC

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: 0.56 Nm max.

Weight: 1.7g (approximately)

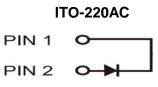
PARAMETER	SYMBOL	UGF8JD		UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	600		V
Maximum average forward rectified current	I _{F(AV)}	8.0		А
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100		А
Maximum instantaneous forward voltage (Note 1) I_F = 8 A	V _F	2.3		V
T _J =25°C		0.5		μΑ
Maximum reverse current @ rated V_R T _J =125°C	I _R	100		
Reverse recovery time		TYP	MAX	
I _F =0.5A, I _{RR} =0.25A, I _R =1A, T _J =25°C	t _{rr}	13	-	ns
I _F =1A, dI _F /dt=-50A/μs, V _R =30V, T _J =25°C		-	30	
Reverse recovery charges		TYP	MAX	
I _F =1A, dI _F /dt=-200A/μs, V _R =400V, T _J =125°C	Qrr	90	-	nC
I _F =1A, dI _F /dt=-200A/μs, V _R =400V, T _J =125°C	I _{RM}	5	5.5	A
Typical thermal resistance	R _{eJC}	4		°C/W
Operating junction temperature range	TJ	- 55 to +150		°C
Storage temperature range	T _{STG}	- 55 to +150		°C

Note 1: Pulse test with PW=300 $\mu s,\,1\overline{\%}$ duty cycle











ORDERING INFORMATION						
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX ^(*)	PACKAGE	PACKING	
UGF8JD	Н	CO	G	ITO-220AC	50 / Tube	

*: Optional available

EXAMPLE						
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION	
UGF8JDHC0G	UGF8JD	Н	CO	G	AEC-Q101 qualified Green compound	

INSTANTANTANEOUS REVERSE CURRENT (µA)

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

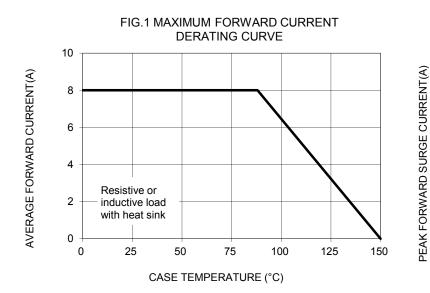


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

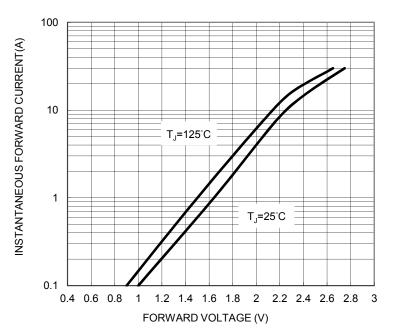




FIG. 2 MAXIMUM FORWARD SURGE CURRENT

NUMBER OF CYCLES AT 60 Hz

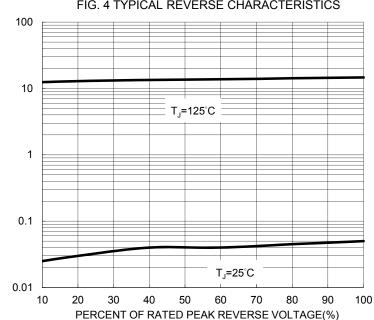
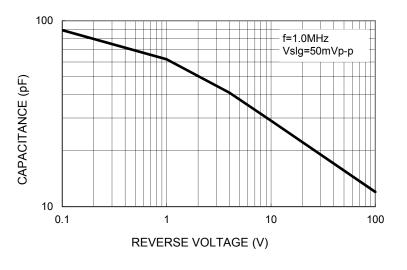


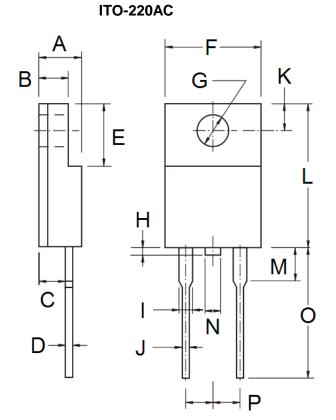




FIG. 5 TYPICAL JUNCTION CAPACITANCE







P/N

YWW

G

F

DIM.	Unit	(mm)	Unit (inch)		
	Min	Max	Min	Max	
А	4.30	4.70	0.169	0.185	
В	2.50	3.10	0.098	0.122	
С	2.30	2.90	0.091	0.114	
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	
Н	0.00	1.60	0.000	0.063	
I	0.95	1.45	0.037	0.057	
J	0.50	0.90	0.020	0.035	
K	2.40	3.20	0.094	0.126	
L	14.80	15.50	0.583	0.610	
М	-	4.10	-	0.161	
Ν	-	1.80	-	0.071	
0	12.60	13.80	0.496	0.543	
Р	4.95	5.20	0.195	0.205	

MARKING DIAGRAM



= Specific Device Code

= Green Compound

= Date Code

= Factory Code



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