

8A, 600V Low V_{F} High Efficient Rectifier

FEATURES

- AEC-Q101 qualified available
- Low conduction loss for high efficiency
- Excellent high temperature stability
- High forward surge capability
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- DC to DC converter
- Switching mode converters and inverters
- Freewheeling application

MECHANICAL DATA

- Case: TO-220AC
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Mounting torque: 0.56 N·m maximum
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 1.85g (approximately)

KEY PARAMETERS			
PARAMETER VALUE UNIT			
I _F	8	А	
V _{RRM}	600	V	
I _{FSM}	100	А	
T _{J MAX}	175	°C	
Package	TO-220AC		
Configuration	Single die		







ABSOLUTE MAXIMUM RATINGS ($T_A = 25^{\circ}C$ unless otherwise noted)				
PARAMETER	SYMBOL	MUR8L60	UNIT	
Marking code on the device		MUR8L60		
Repetitive peak reverse voltage	V _{RRM}	600	V	
Reverse voltage, total rms value	V _{R(RMS)}	420	V	
Forward current	I _F	8	А	
Surge peak forward current 8.3ms single half sine wave superimposed on rated load	I _{FSM}	100	А	
Junction temperature	TJ	-55 to +175	°C	
Storage temperature	T _{STG}	-55 to +175	°C	





THERMAL PERFORMANCE			
PARAMETER	SYMBOL	ТҮР	UNIT
Junction-to-ambient thermal resistance	R _{eja}	7.0	°C/W
Junction-to-case thermal resistance	R _{eJC}	2.5	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}C$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	ТҮР	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 8A, T_J = 25^{\circ}C$	V _F	-	1.3	V
Reverse current @ rated V _R ⁽²⁾	$T_J = 25^{\circ}C$	I _R	-	5	μA
	T _J = 125°C		-	200	μA
Reverse recovery time	IF = 0.5A, IR = 1.0A Irr = 0.25A	t _{rr}	-	65	ns

Notes:

1. Pulse test with PW = 0.3ms

2. Pulse test with PW = 30ms

ORDERING INFORMATION		
ORDERING CODE ⁽¹⁾	PACKAGE	PACKING
MUR8L60	TO-220AC	50 / Tube
MUR8L60H	TO-220AC	50 / Tube

Notes:

1. "H" means AEC-Q101 qualified



CHARACTERISTICS CURVES

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

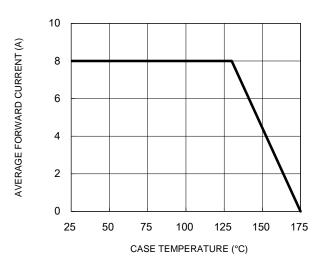


Fig.1 Forward Current Derating Curve

Fig.3 Typical Reverse Characteristics

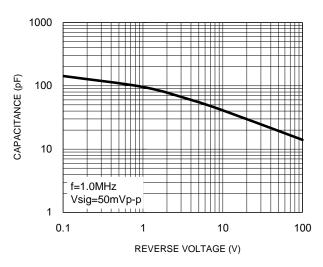


Fig.2 Typical Junction Capacitance



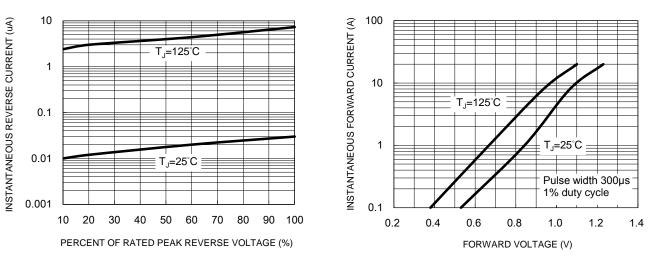
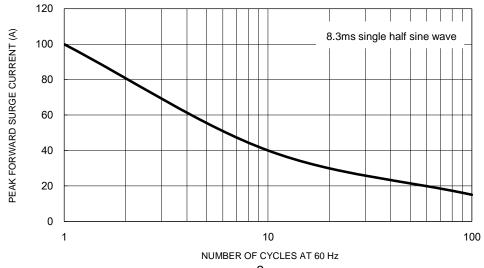
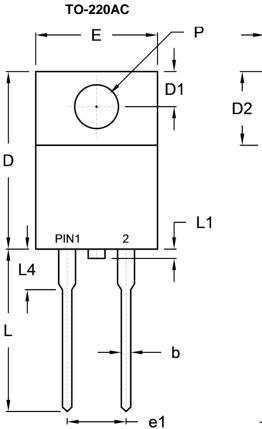


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS



-	_	A ━	-	c2
2				
		• • •		
		A2		
-		-	С	

DIM.	Unit (mm)		Unit	inch)	
	Min.	Max.	Min.	Max.	
А	4.42	4.76	0.174	0.187	
A2	2.20	2.80	0.087	0.110	
b	0.68	0.94	0.027	0.037	
с	0.35	0.64	0.014	0.025	
c2	1.14	1.40	0.045	0.055	
D	14.60	16.00	0.575	0.630	
D1	2.62	3.44	0.103	0.135	
D2	5.84	6.86	0.230	0.270	
Е	-	10.50	-	0.413	
e1	4.95	5.20	0.195	0.205	
L	13.19	14.79	0.519	0.582	
L1	0.00	1.60	0.000	0.063	
L4	2.80	4.20	0.110	0.165	
Р	3.54	4.00	0.139	0.157	

MARKING DIAGRAM



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



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