

8A,600V Ultrafast Recovery Rectifier

Features

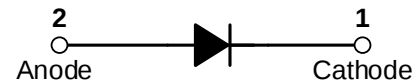
- FRED Wafer Construction
- Low forward drop voltage, low power loss
- High Surge Current Capability
- Plastic package has underwriters Laboratory
Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



TO-220AC

Applications

- SMPS
- Lighting
- UPS



Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.9grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	MUR860	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	600	V
Working peak reverse voltage	V _{RMS}	420	V
Maximum DC blocking voltage	V _{DC}	600	V
Maximum average forward rectified current	I _{F(AV)}	8	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	125	A
Voltage rate of change (rated V _R)	dv/dt	10000	V/μS
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Electrical Specifications (T _A =25°C unless otherwise noted)					
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward Drop Voltage (Note1)	V _F	I _F =8A, T _J =25°C	-	1.50	V
		I _F =8A, T _J =125°C	-	1.40	
Reverse leakage current @V _R (Note2)	I _R	T _J =25°C	-	10	uA
		T _J =125°C	-	500	
Reverse recovery time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	-	50	ns

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	R _{θJC}	2.0	°C /W
Thermal Resistance, Junction to Ambient	R _{θJA}	62.5	°C /W

Note:

1. Pulse test with PW=0.3ms, duty cycle=2%
2. Pulse test with PW=30ms

Ratings and Characteristics Curves

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

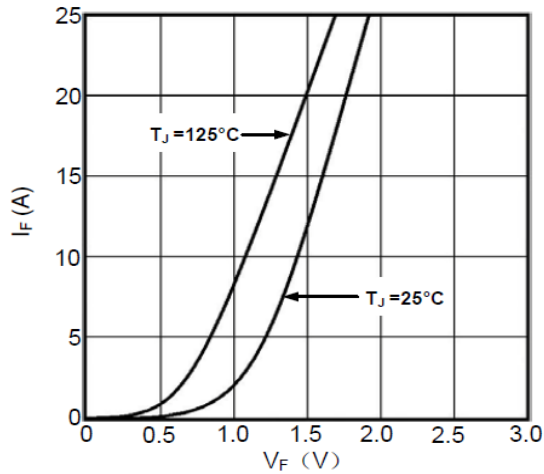


Fig1. Forward Voltage Drop vs Forward Current

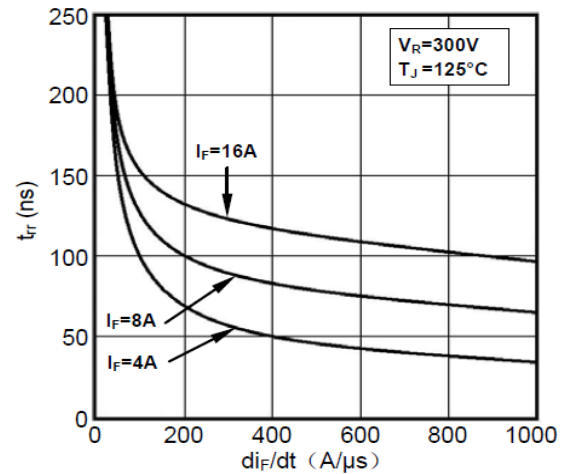


Fig2. Reverse Recovery Time vs di_F/dt

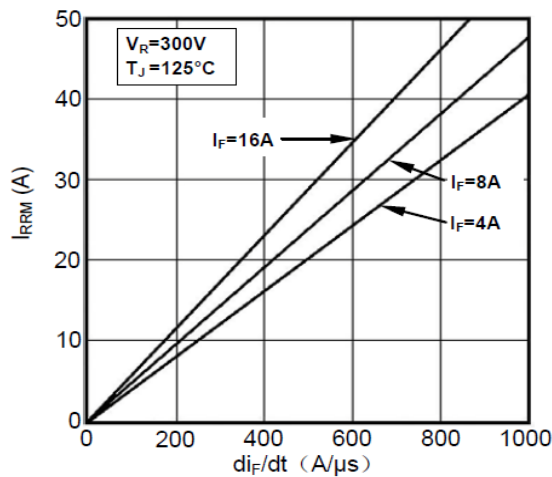


Fig3. Reverse Recovery Current vs di_F/dt

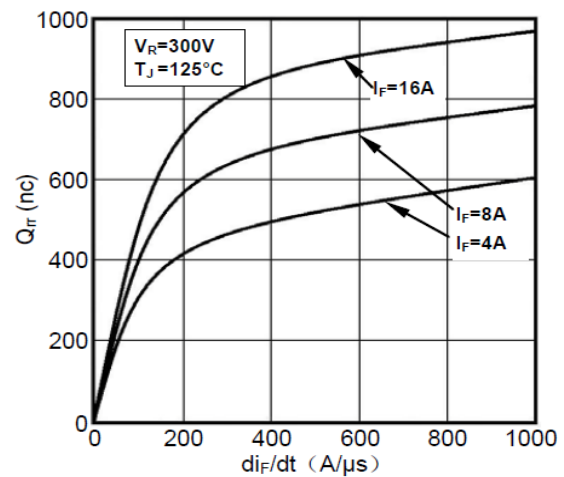


Fig4. Reverse Recovery Charge vs di_F/dt

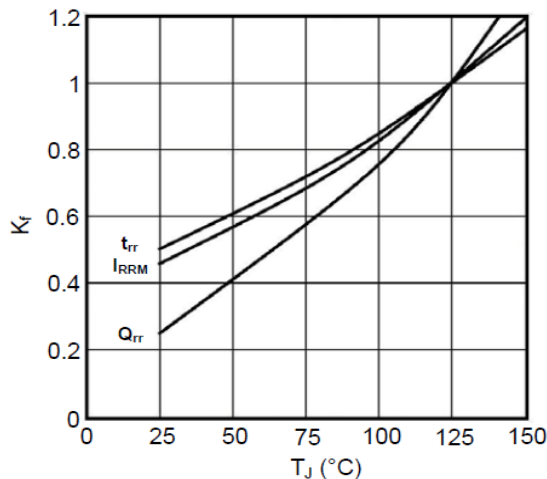


Fig5. Dynamic Parameters vs Junction Temperature

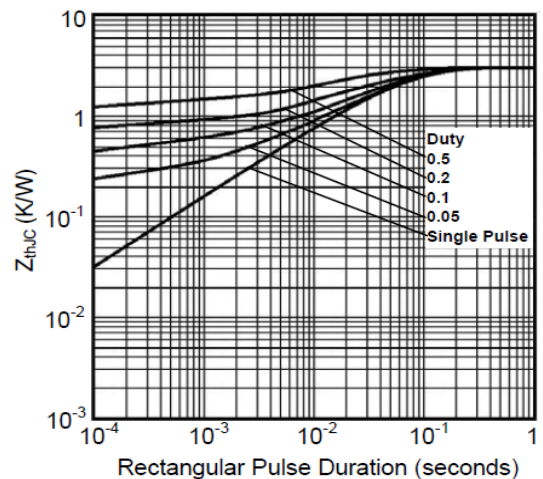
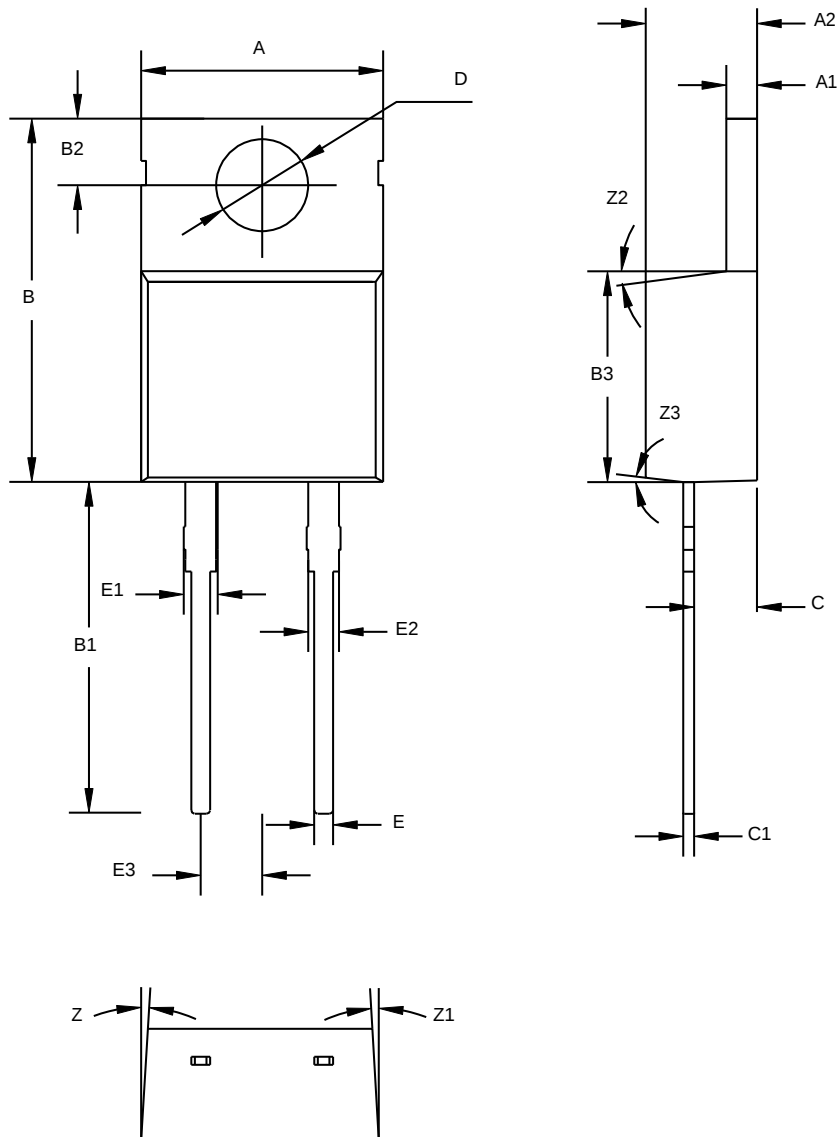


Fig6. Transient Thermal Impedance

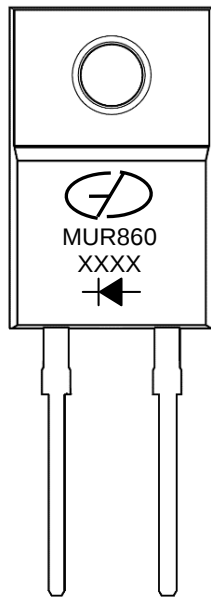
Package Outline Dimensions (Unit: millimeters)

TO-220AC



TO-220AC							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	9.8	10	10.2	D	3.7	3.8	3.9
A1	1.17	1.27	1.37	E	0.68	0.78	0.88
A2	4.5	4.6	4.7	E1	1.2	1.4	1.6
B	14.5	15	15.5	E2	1.17	1.27	1.37
B1	13.2	13.7	14.2	E3	2.44	2.54	2.64
B2	2.65	2.75	2.85	Z		3°	
B3	8.5	8.7	8.9	Z1		3°	
C	2.3	2.6	2.9	Z2		7°	
C1	0.3	0.45	0.6	Z3		7°	

Marking Outline



1. Logo Mark: 
2. Part Name: MUR860
3. Data Code: XXXX
4. Polarity : 

Revision History

Document Version	Date of release	Description of changes
Rev.A	2013.12.15	Released Datasheet
Rev.B	2021.01.22	Modify document format

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