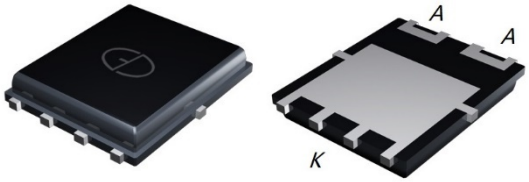
5A,600V Ultrafast Recovery Rectifier

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



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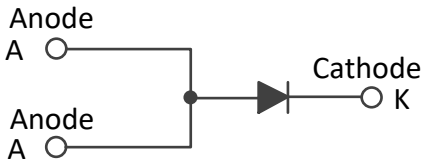
Applications

- SMPS
- Lighting
- UPS



Mechanical Data

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 3000 units per reel

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

Parameter	Symbol	MURP560	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Working peak reverse voltage	V_{RWM}	600	V
Maximum DC blocking voltage	V_{DC}	600	V
Maximum average forward rectified current	$I_{F(AV)}$	5	A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I_{FSM}	60	A
Voltage rate of change (rated V_R)	dv/dt	10000	V/uS
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Specifications(T_A=25℃ unless otherwise noted)					
Parameter	**Symbol**	**Test Conditions**	**Typ**	**Max**	**Unit**
Forward drop voltage (Note1)	V_F	I_F=5A, T_J =25℃	1.40	1.60	V
		I_F=5A, T_J =125℃	-	1.50	
Reverse leakage current @VR (Note2)	I_R	T_J =25℃	-	10	uA
		T_J =125℃	-	500	
Reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	-	50	ns

Thermal-Mechanical Specifications (T_A=25℃ unless otherwise noted)			
Parameter	**Symbol**	**Typ**	**Unit**
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.5	V
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62.5	uA

Note：

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

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

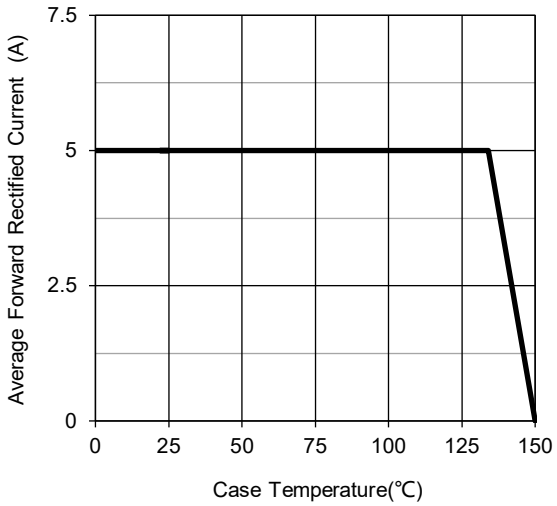


Fig.1 – Forward Current Derating Curve

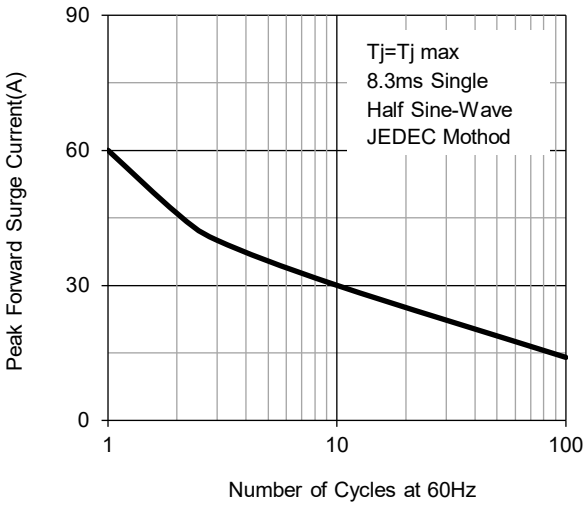


Fig.2 – Maximum Non-Repetitive Surge Current

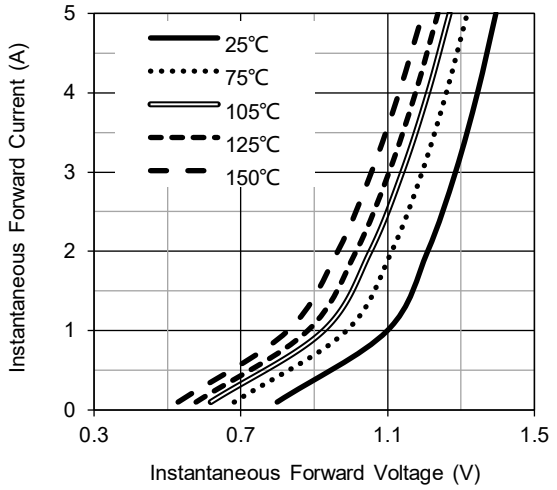


Fig.3 – Typical Forward Voltage Characteristics

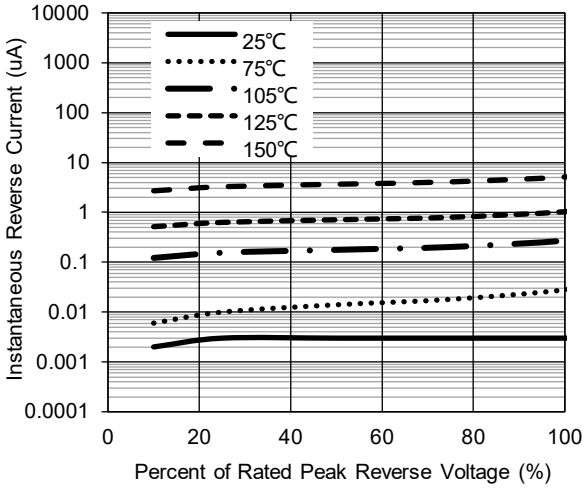


Fig.4 – Typical Reverse Current Characteristics

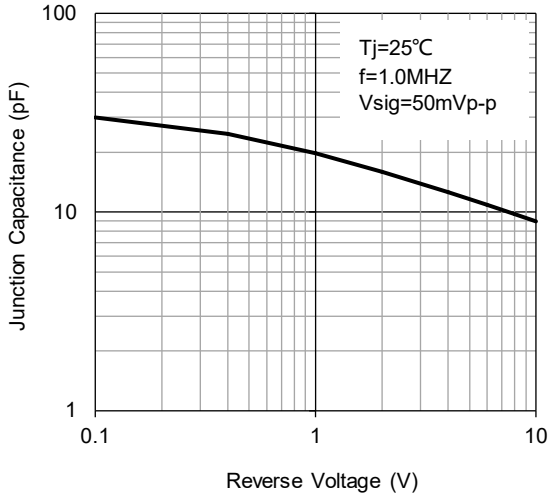


Fig.5 – Typical Junction Capacitance

Package Outline Dimensions (Unit: millimeters)

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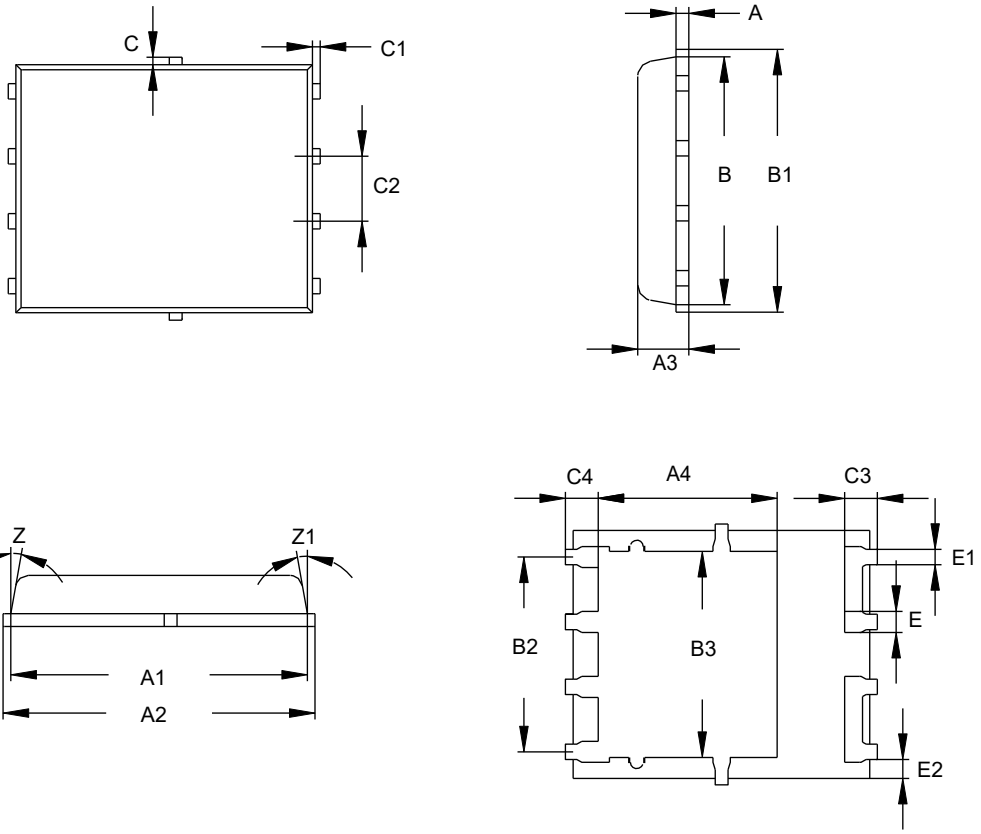

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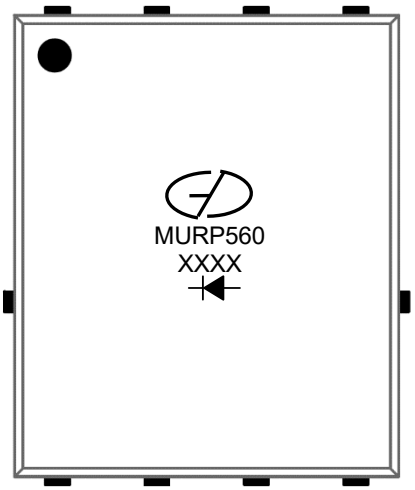
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	0.15	0.25	0.35	C1	0.05	0.15	0.25
A1	5.6	5.8	6.0	C2	1.17	1.27	1.37
A2	5.9	6.1	6.3	C3	0.53	0.63	0.73
A3	0.9	1	1.1	C4		0.63	
A4		3.5		E	0.31	0.41	0.51
B	4.7	4.9	5.1	E1	0.2	0.3	0.4
B1	5	5.2	5.4	E2	0.25	0.35	0.45
B2	3.71	3.81	3.91	Z	8°	10°	12°
B3		4		Z1	8°	10°	12°
C	0.05	0.15	0.25				

Marking Outline



1. Logo Mark:
2. Part Name: MURP560
3. Date Code: XXXX
4. Polarity：

Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.11.09	Released Datasheet

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