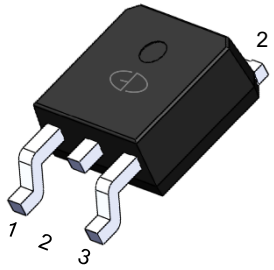
8A,800V Ultrafast Recovery Rectifier

Features

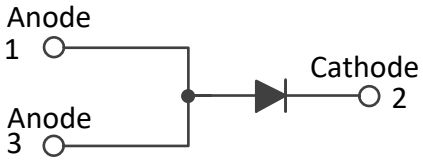
- FRED Wafer Construction
- Low forward drop voltage, low power loss
- High Surge Current Capability
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21
- AEC-Q101 Qualified



TO-252（D-PAK）

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 2500 units per reel

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

Parameter	Symbol	MURD880S	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	800	V
Working peak reverse voltage	V_{RWM}	800	V
Maximum DC blocking voltage	V_{DC}	800	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}	80	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

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)			
Parameter	**Symbol**	**Typ**	**Unit**
Thermal Resistance, Junction to Case	R_{thJC}	3.5	°C /W
Thermal Resistance, Junction to Ambient	R_{thJA}	62.5	°C /W

Electrical Specifications(T_A=25°C unless otherwise noted)					
Parameter	**Symbol**	**Test Conditions**	**Typ**	**Max**	**Unit**
Forward drop voltage *(Note 1)*	V_F	I_F=8A, T_J =25°C	1.65	2.10	V
		I_F=8A, T_J =125°C	-	2.05	
Reverse leakage current @VR *(Note 2)*	I_R	T_J =25°C	-	10	uA
		T_J =100°C	-	500	
Reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	-	55	ns

Note 1: Pulse test with PW=0.3ms, duty cycle=2%

Note 2: Pulse test with PW=30ms

Ratings and Characteristics Curves (T$_A$=25°C unless otherwise noted)

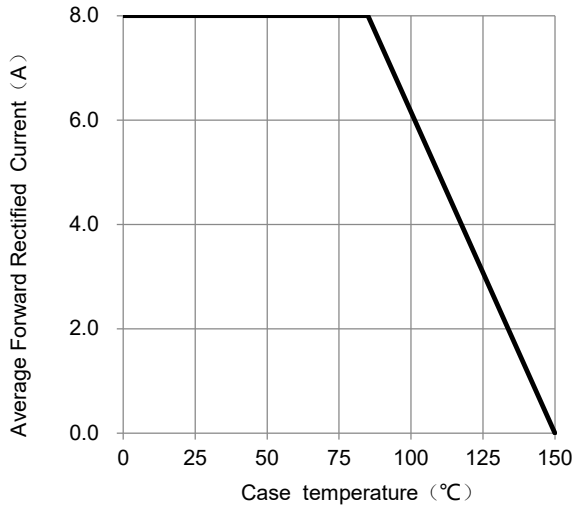


Fig.1 – Forward Current Derating Curve

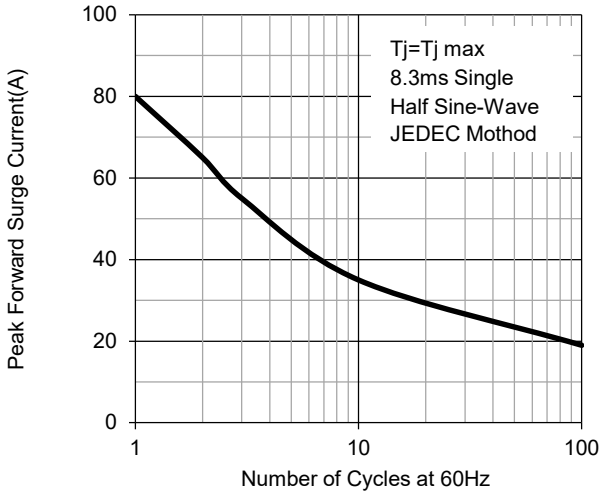


Fig.2 – Maximum Non-Repetitive Surge Current

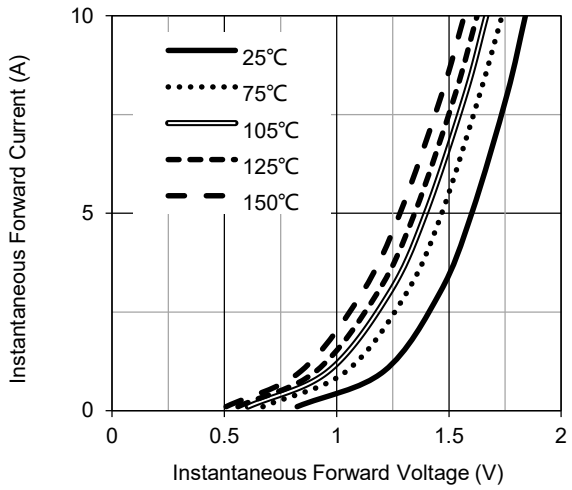


Fig.3 – Typical Forward Voltage Characteristics

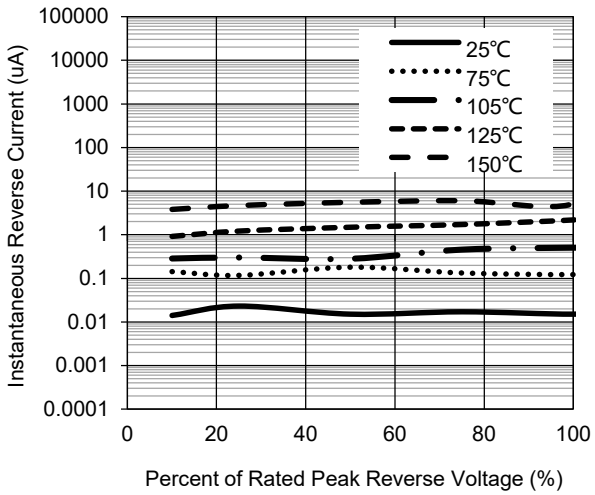


Fig.4 – Typical Reverse Current Characteristics

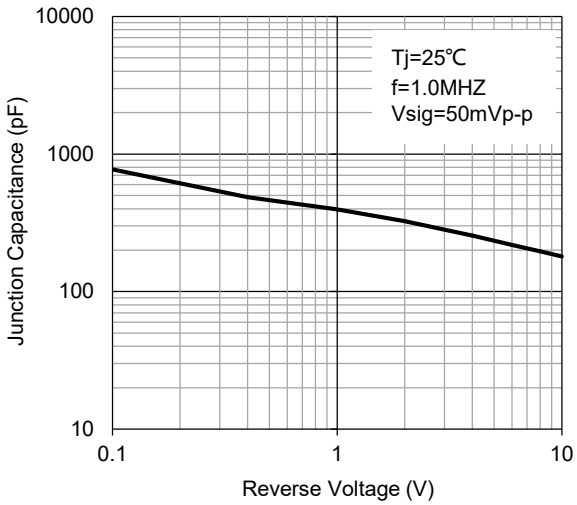
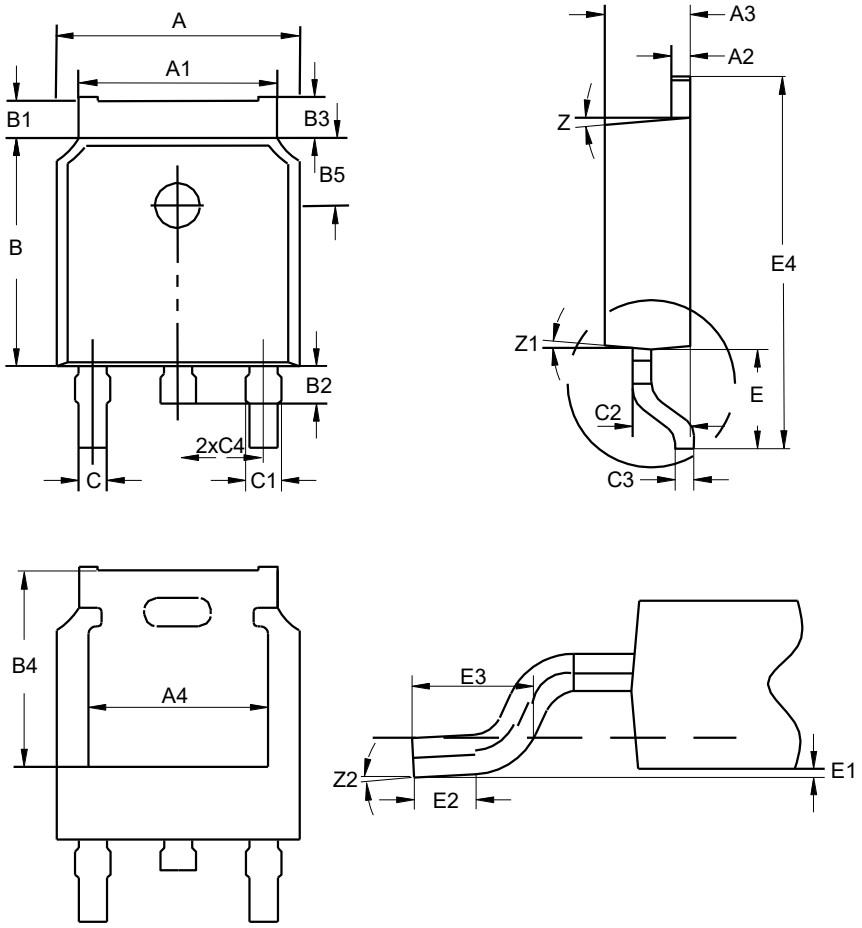


Fig.5 – Typical Junction Capacitance

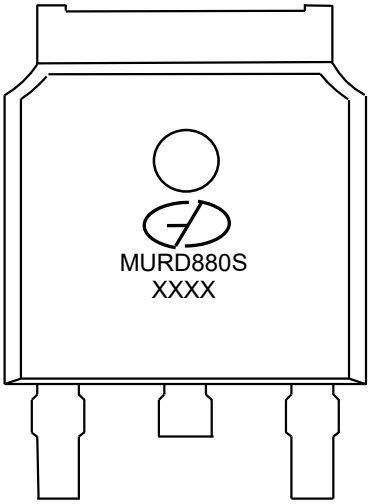
Package Outline Dimensions (Unit: millimeters)

TO-252（D-PAK）



TO-252							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	6.34	6.54	6.74	C1	0.65	0.85	1.05
A1	5.1	5.3	5.5	C2	1.34	1.54	1. 74
A2	0.4	0.5	0.6	C3	0.4	0.5	0.6
A3	2.08	2.28	2.48	C4	2.09	2.29	2.49
A4	4.6	4.8	5.0	E	2.6	2.9	3.2
B	5.8	6.1	6.4	E1	0	-	0.15
B1	0.82	1.02	1.22	E2	0.7	-	-
B2	0.8	1	1.2	E3	1.3	1.6	1.9
B3	0.9	1.1	1.3	E4	9.8	10.1	10.4
B4	5.05	5.25	5.45	Z	-	7°	-
B5	7.83	8.03	8.23	Z1	-	7°	-
C	0.56	0.76	0.96	Z2	0°	-	10°

Marking Outline



1. Logo Mark:
2. Part Name: MURD880S
3. Date Code: XXXX

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