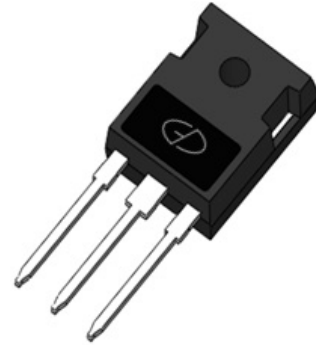


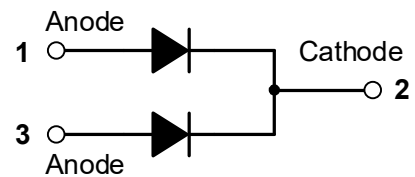
## 30A,600V Ultrafast Recovery Rectifier

### 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-247AD



### Applications

- SMPS
- Adapter
- Server Power

### 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 30 units per plastic tube

### Maximum Ratings & Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	MUR3060PT	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	600	V
Working peak reverse voltage	V <sub>RWM</sub>	600	V
Maximum DC blocking voltage	V <sub>DC</sub>	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	30	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	150	A
Voltage rate of change (rated V <sub>R</sub> )	dv/dt	10000	V/uS
Operating junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

Electrical Specifications (T <sub>A</sub> =25°C unless otherwise noted)					
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage (Note1)	V <sub>F</sub>	I <sub>F</sub> =15A, T <sub>J</sub> =25°C	1.40	1.60	V
		I <sub>F</sub> =15A, T <sub>J</sub> =125°C	-	1.50	
		I <sub>F</sub> =30A, T <sub>J</sub> =25°C	-	-	
		I <sub>F</sub> =30A, T <sub>J</sub> =125°C	-	-	
Reverse leakage current @V <sub>R</sub> (Note2)	I <sub>R</sub>	T <sub>J</sub> =25°C	-	10	uA
		T <sub>J</sub> =100°C	-	500	
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A	-	50	ns

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	0.8	°C/W
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	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)

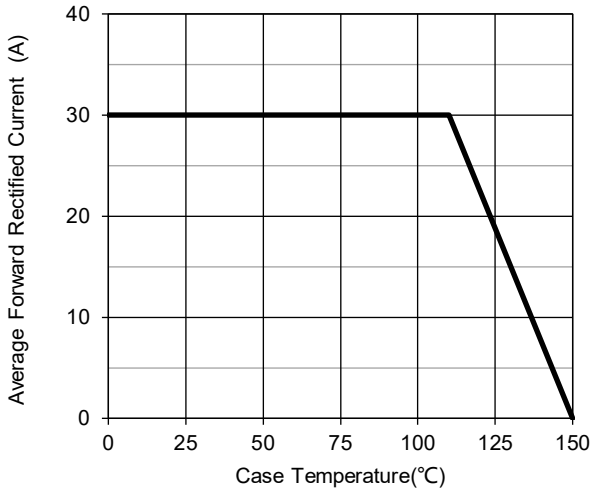


Fig.1 – Forward Current Derating Curve

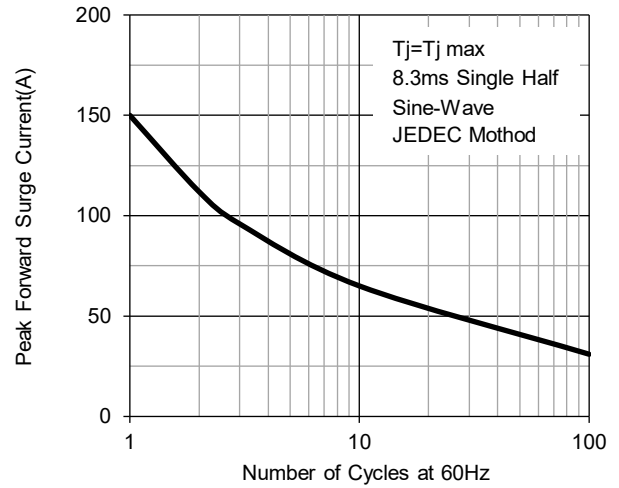


Fig.2 – Maximum Non-Repetitive Surge Current

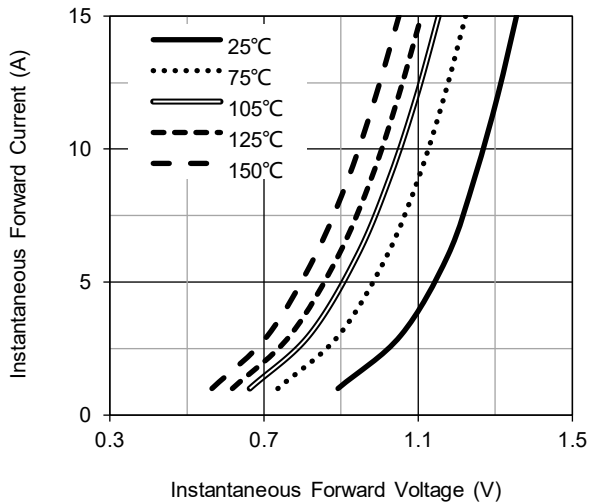


Fig.3 – Typical Forward Voltage Characteristics

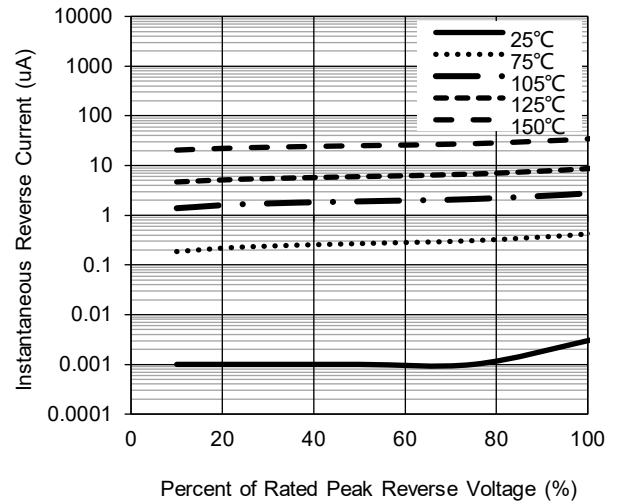


Fig.4 – Typical Reverse Current Characteristics

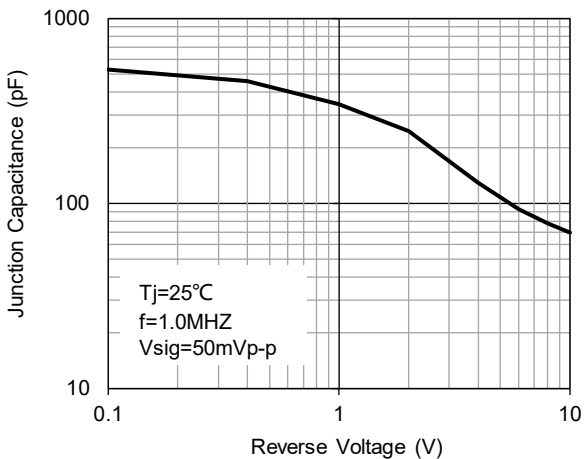
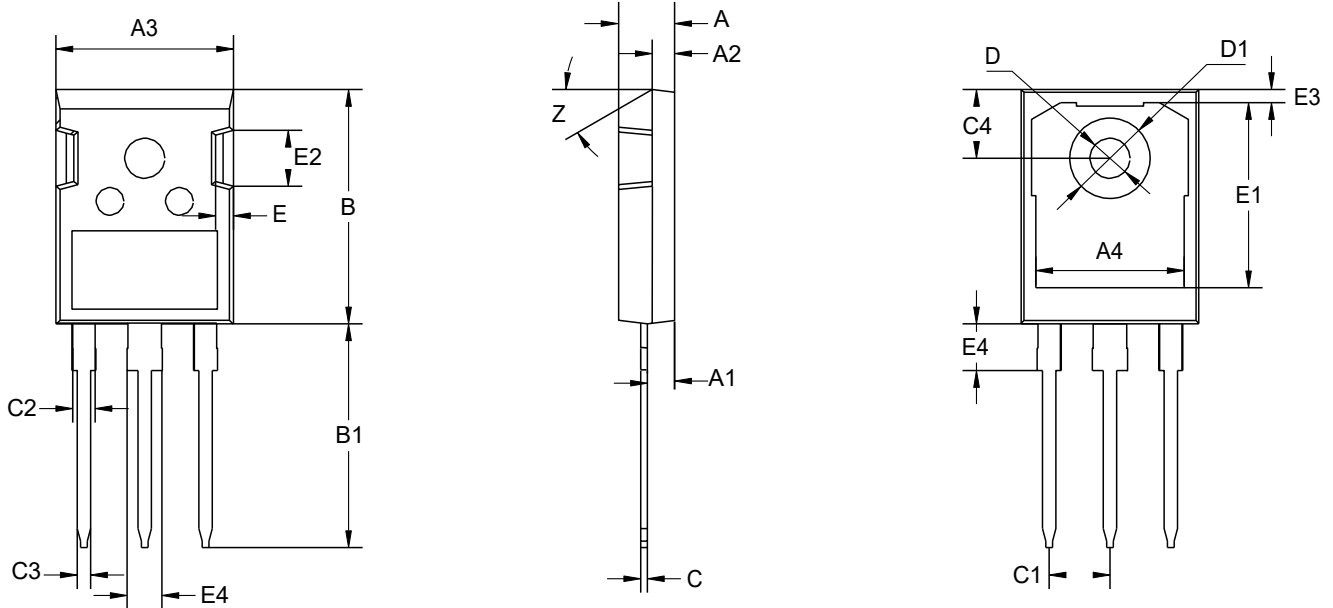


Fig.5 – Typical Junction Capacitance

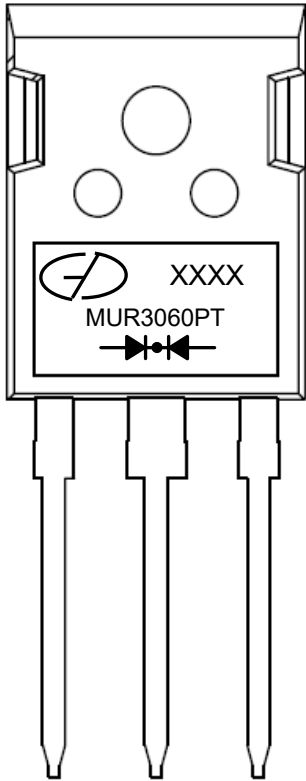
**Package Outline Dimensions** (Unit: millimeters)


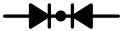
**TO-247AD**



TO-247AD							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	4.7	5	5.2	C3	1.1	1.2	1.3
A1	2.3		2.5	C4	6.04	6.15	6.30
A2	1.9	2	2.1	D	3.5	3.6	3.7
A3	15.48	15.88	16.28	D1	7	7.19	7.4
A4	13.06	13.26	13.56	E	1.5	1.6	1.7
B	20.8	20.95	21.1	E1		16.55	
B1	19.8	20	20.32	E2	4.9	5.0	5.1
C	0.5	0.6	0.7	E3	0.95	1.17	1.35
C1	5.34	5.44	5.54	E4		4.17	4.5
C2		2		Z		30°	

## Marking Outline



1. Logo Mark: 
2. Part Name: MUR3060PT
3. Date Code: XXXX
4. Polarity : 

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.05.12	Released Datasheet
Rev.B	2022.03.02	Modify Peak forward surge current
Rev.C	2022.05.06	Update ratings and characteristics curves

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