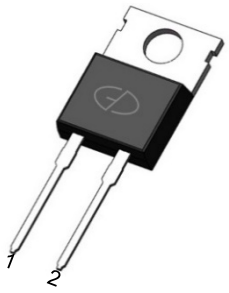
30A,650V Ultrafast Recovery Rectifier

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



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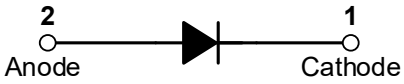

Applications

- SMPS
- Inverter
- 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 50 units per plastic tube

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

Parameter	Symbol	AMUR3065	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	650	V
Working peak reverse voltage	V_{RWM}	650	V
Maximum DC blocking voltage	V_{DC}	650	V
Maximum average forward rectified current	$I_{F(AV)}$	30	A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300	A
Voltage rate of change (rated V_R)	dv/dt	10000	V/us
Operating junction temperature range	T_J	-55 to +175	°C
Storage temperature range	T_{STG}	-55 to +175	°C

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	R_{thJC}	2.0	°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=30A, T_J =25°C	1.55	1.90	V
		I_F=30A, T_J =125°C	-	1.80	
Reverse leakage current @VR *(Note 2)*	I_R	T_J =25°C	-	10	uA
		T_J =125°C	-	500	
Reverse recovery time	trr	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	-	65	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)

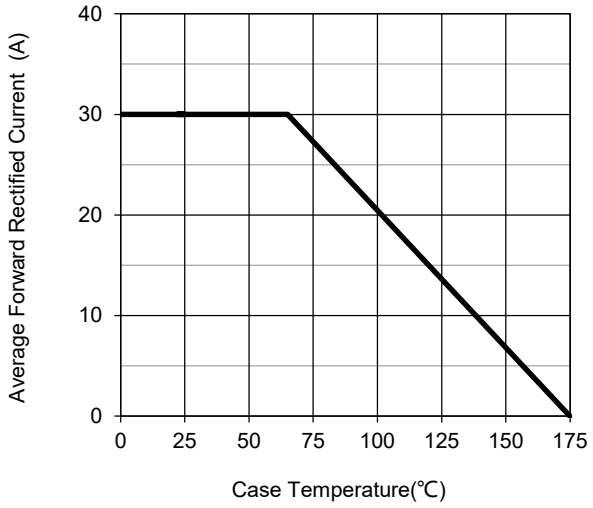

Fig.1 – Forward Current Derating Curve

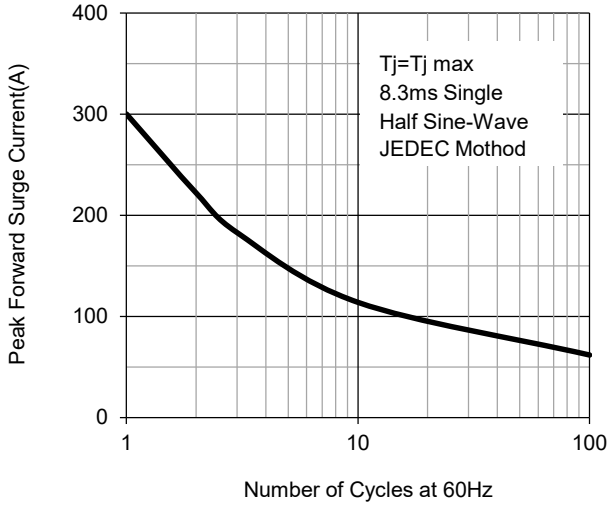

Fig.2 – Maximum Non-Repetitive Surge Current

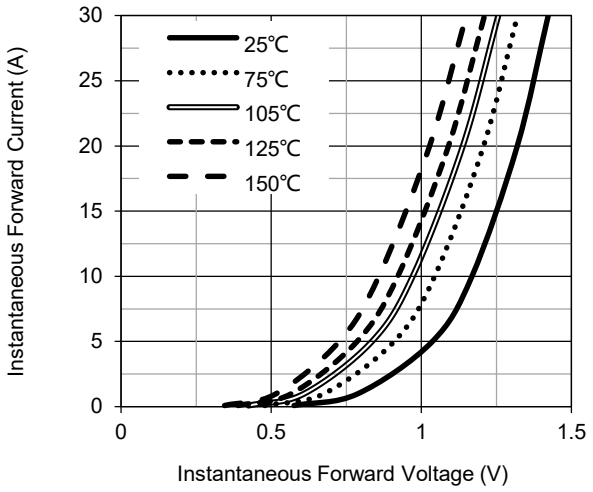

Fig.3 – Typical Forward Voltage Characteristics

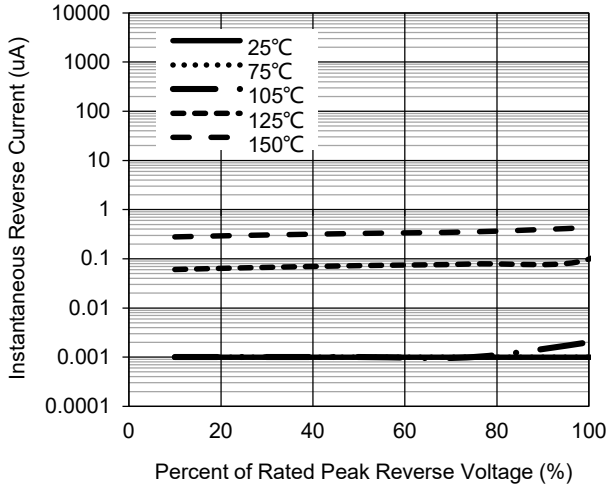

Fig.4 – Typical Reverse Current Characteristics

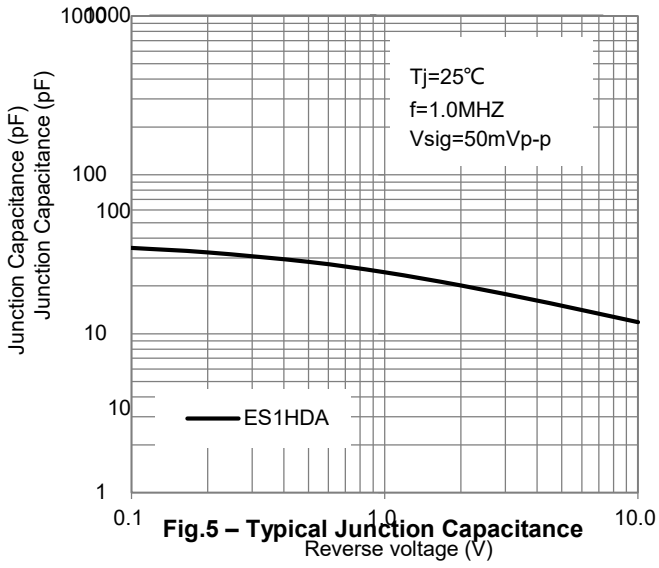

Fig.5 – Typical Junction Capacitance

Package Outline Dimensions (Unit: millimeters)

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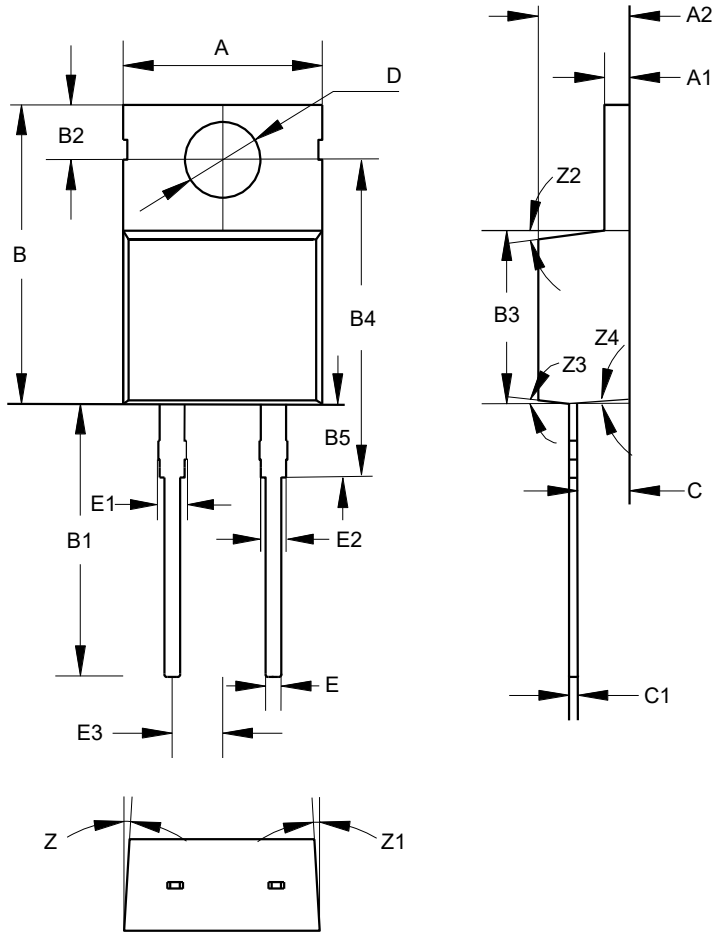
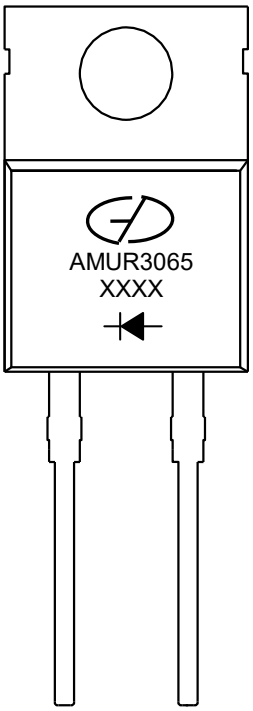


TO-220AC							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	9.8	10	10.2	D	3.7	3.8	3.9
A1	1.17	1.27	1.37	E	0.68	0.78	0.88
A2	4.5	4.6	4.7	E1	1.2	1.4	1.6
B	14.5	15	15.5	E2	1.17	1.27	1.37
B1	13.2	13.7	14.2	E3	2.44	2.54	2.64
B2	2.65	2.75	2.85	Z	-	3°	-
B3	8.5	8.7	8.9	Z1	-	3°	-
B4	15.5	16	16.5	Z2	-	7°	-
B5	3.4	3.7	4.0	Z3	-	7°	-
C	2.3	2.6	2.9	Z4	-	1.5°	-
C1	0.28	0.38	0.48	-	-	-	-

Marking Outline



1. Logo Mark:
2. Part Name: AMUR3065
3. Date Code: XXXX
4. Polarity :

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