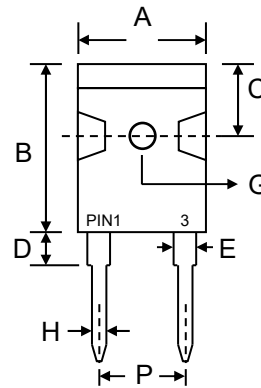


Features

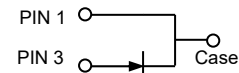
- Planar Die Construction
- Superfast 35nS and 50nS Recovery Time
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- Soft Recovery Characteristics
- Epoxy Meets UL 94V-0 Classification
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: TO-247AC-A, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 1.2 N.m Max.
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



TO-247AC-A		
Dim	Min	Max
A	15.30	15.90
B	20.25	20.65
C	5.30	5.98
D	4.35	4.65
E	1.70	2.30
G	3.50 Ø	3.65 Ø
H	0.90	1.50
J	4.70	5.30
K	1.80	2.20
L	20.30	21.00
M	0.50	0.70
N	2.20	2.60
P	10.70	11.10



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	RURG3020	RURG3040	RURG3060	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	200	400	600	V
Working Peak Reverse Voltage	V _{RWM}				
DC Blocking Voltage	V _R				
RMS Reverse Voltage	V _{R(RMS)}	140	280	420	V
Average Rectified Output Current @T _C = 130°C	I _o	30			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	325			A
Forward Voltage @I _F = 30A	V _{FM}	1.1	1.3	1.5	V
Peak Reverse Current @T _C = 25°C	I _{RM}	250			µA
At Rated DC Blocking Voltage @T _C = 100°C		1.0			
Reverse Recovery Time (Note 1)	t _{rr}	35	50		nS
Typical Junction Capacitance (Note 2)	C _J	180		150	pF
Thermal Resistance Junction to Case	R _{JC}	1.2			°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175			°C

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

RURG3020 – RURG3060

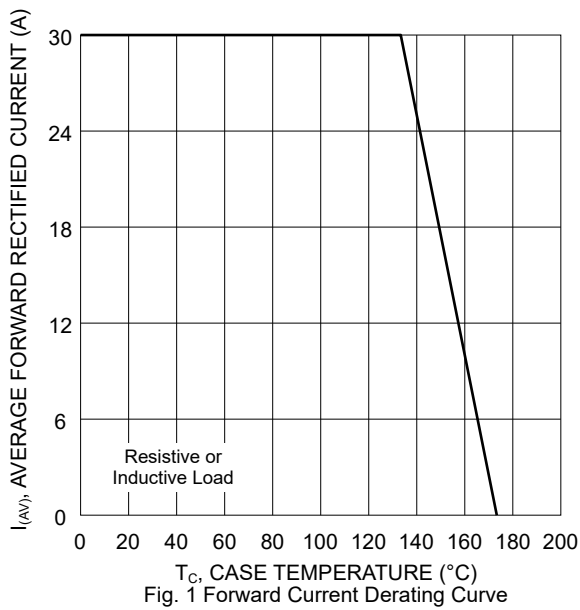


Fig. 1 Forward Current Derating Curve

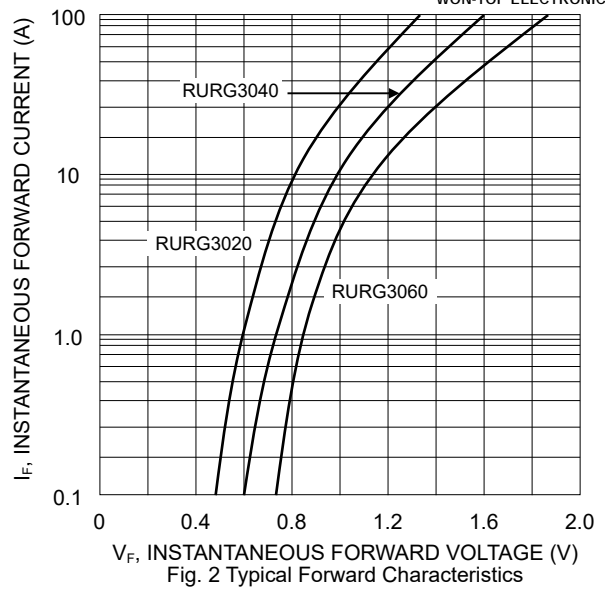


Fig. 2 Typical Forward Characteristics

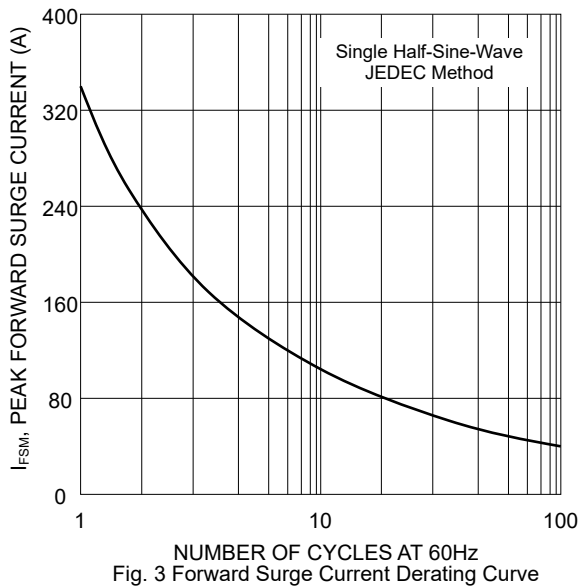


Fig. 3 Forward Surge Current Derating Curve

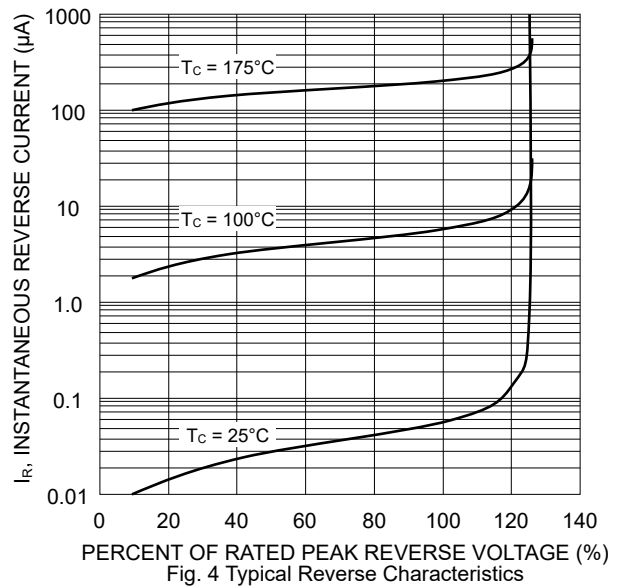


Fig. 4 Typical Reverse Characteristics

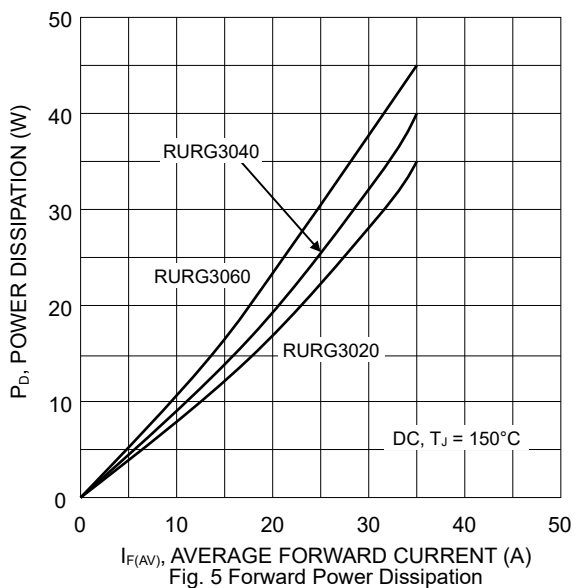


Fig. 5 Forward Power Dissipation

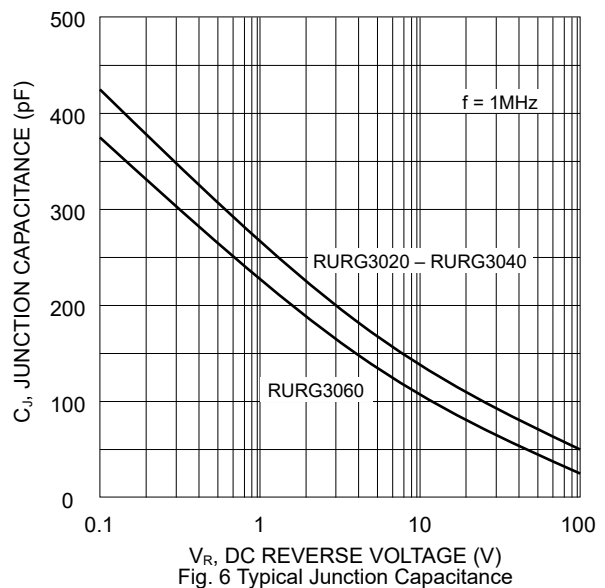
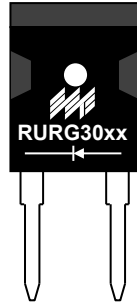


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



RURG30xx = Device Number
 xx = 20, 40, or 60
 Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
505 x 46 x 6.5	30	520 x 145 x 95	1,200	540 x 306 x 115	2,400	18.0

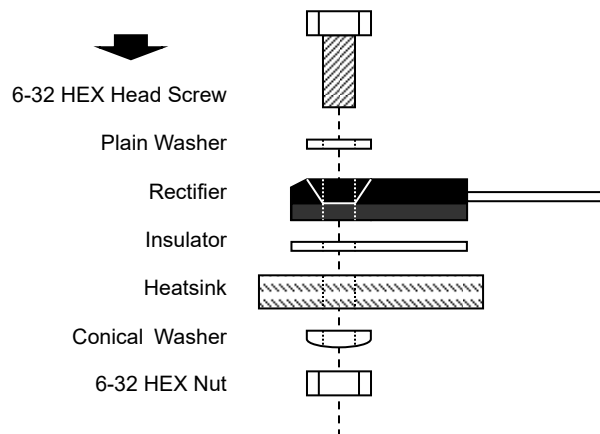
Note: 1. Anti-static tube, water clear color.

RECOMMENDED SCREW MOUNTING ARRANGEMENT

Recommended isolated mounting when screw is at heatsink potential. 6-32 hardware is used.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package.


The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation.



ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
RURG3020	TO-247AC-A	30 Units/Tube
RURG3040	TO-247AC-A	30 Units/Tube
RURG3060	TO-247AC-A	30 Units/Tube

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, RURG3020-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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