

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number: GURB5H60-E3/81

Manufacturer: Vishay General Semiconductor - Diodes Division

Package: TO-263-3, D2PAK (2 Leads + Tab), TO-263AB

Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/vishay-general-semiconductor-diodes-division/gurb5h60-e3-81.html>



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Contact Information

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Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

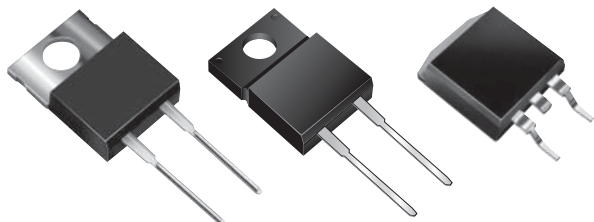
Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

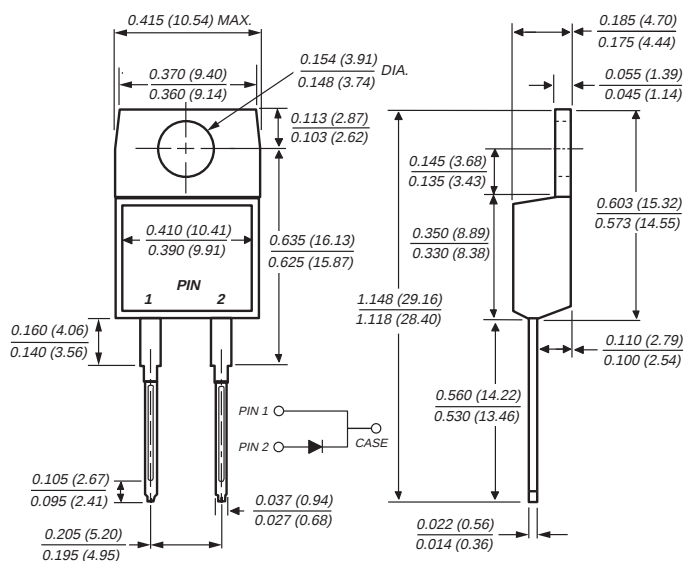
The original manufacturer datasheet follows from the next page.

Ultrafast Rectifiers

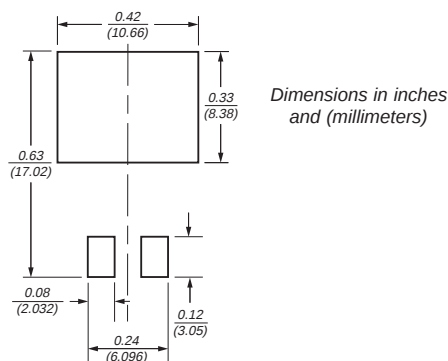


Reverse Voltage	600V
Forward Current	5.0A
Reverse Recovery Time	30ns

TO-220AC (GUR5H60)



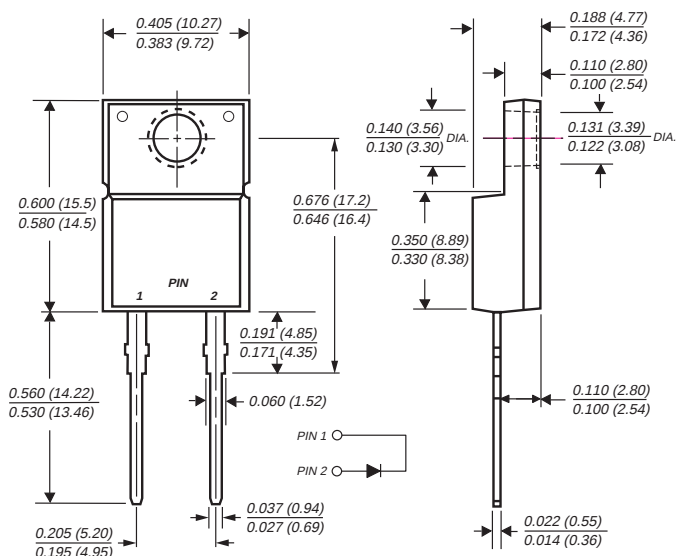
Mounting Pad Layout TO-263AB



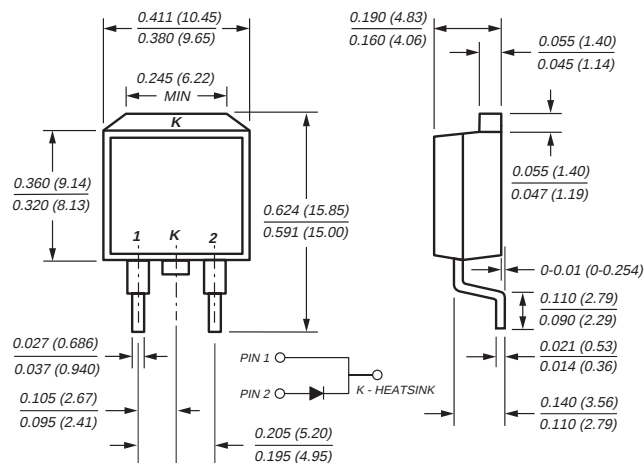
Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for freewheeling diode and power factor correction applications
- Low leakage
- Superfast recovery time for high efficiency
- Ideal for diode modulation and secondary DC/DC output rectification
- Glass passivated chip junction

ITO-220AC (GURF5H60)



TO-263AB (GURB5H60)



Mechanical Data

Case: JEDEC TO-220AC, ITO-220AC & TO-263AB
molded plastic body

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

High temperature soldering in accordance with CECC
802 / Reflow guaranteed

Polarity: As marked **Mounting Position:** Any

Mounting Torque: 10 in-lbs maximum

Weight: 0.08 oz., 2.24 g

Maximum Ratings (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	600	V
Maximum working reverse voltage	V _{RWM}	480	V
Maximum RMS voltage	V _{RMS}	420	V
Maximum DC blocking voltage	V _{DC}	600	V
Maximum average forward rectified current	I _{F(AV)}	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T _C = 100°C	I _{FSM}	90	A
Reverse Energy	E _R	10	mJ
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C
RMS Isolation voltage (GURF types only) from terminals to heatsink with t = 1.0 second, RH ≤ 30%	V _{ISOL}	4500 ⁽¹⁾ 3500 ⁽²⁾ 1500 ⁽³⁾	V

Electrical Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum instantaneous forward voltage ⁽⁴⁾ I _F = 5A, T _J = 25°C I _F = 5A, T _J = 150°C	V _F	1.8 1.6	V
Maximum DC reverse current at V _{RWM} T _J = 25°C T _J = 150°C	I _R	20 400	μA
Maximum reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	30	ns

Thermal Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	GUR	GURF	GURB	Unit
Typical thermal resistance from junction to case	R _{θJC}	2	3	2	°C/W

Notes: (1) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
(3) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19")

(2) Clip mounting (on case), where leads do overlap heatsink
(4) Pulse test: 300μs pulse width, 1% duty cycle

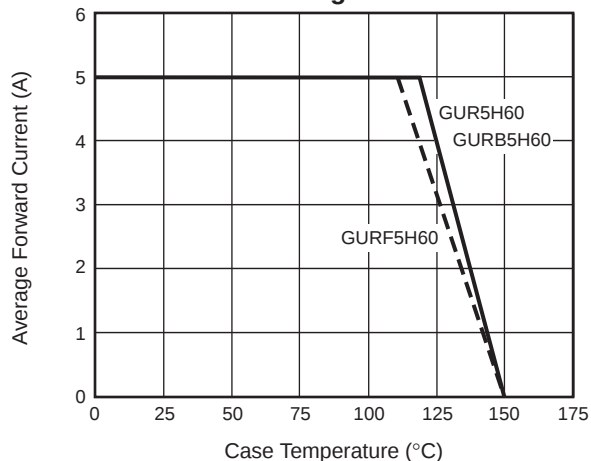
Ordering Information

Product	Case	Package Code	Package Option
GUR5H60	TO-220AC	45	Anti-Static tube, 50/tube, 2K/carton
GURF5H60	ITO-220AC	45	Anti-Static tube, 50/tube, 2K/carton
GURB5H60	TO-263AB	31 45 81	13" reel, 800/reel, 4.8K/carton Anti-Static tube, 50/tube, 2K/carton Anti-Static 13" reel, 800/reel, 4.8K/carton



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

**Fig. 1 – Forward Current
Derating Curve**



**Fig. 2 – Maximum Non-Repetitive Peak
Forward Surge Current**

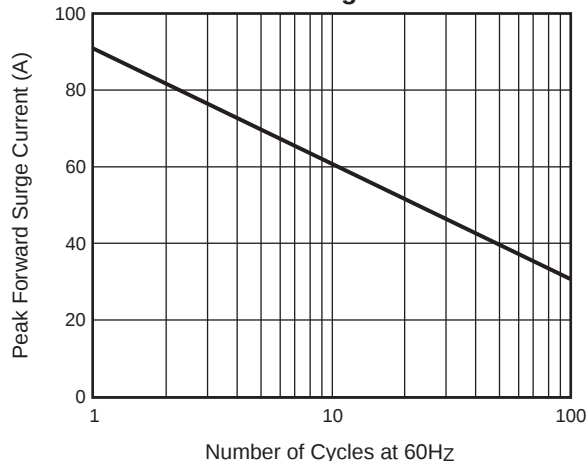


Fig. 3 – Typical Reverse Current

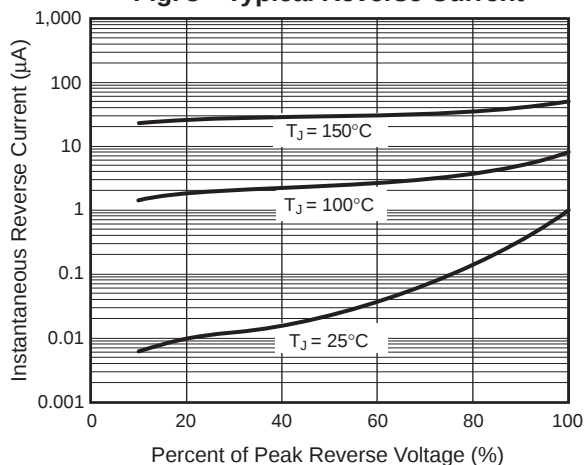


Fig. 4 – Typical Forward Voltage

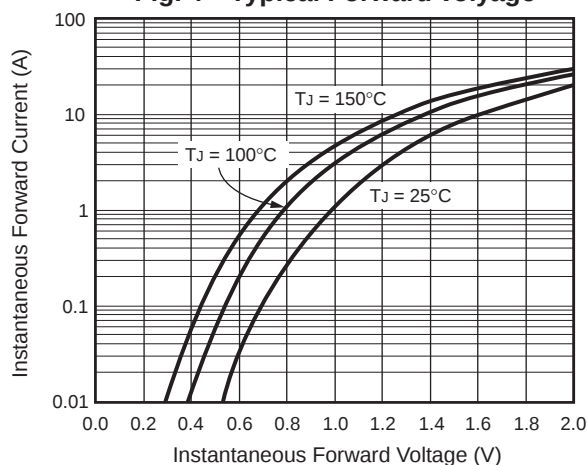


Fig. 5 – Typical Junction Capacitance

