ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	GUR5H60HE3/45
Manufacturer:	Vishay General Semiconductor - Diodes Division
Package:	TO-220-2
Availability:	Please confirm with sales

Product Page:

https://antrexco.com/product/details/vishay-general-semiconductor-diodes-division gur5h60he3-45.html

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Contact Information

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New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

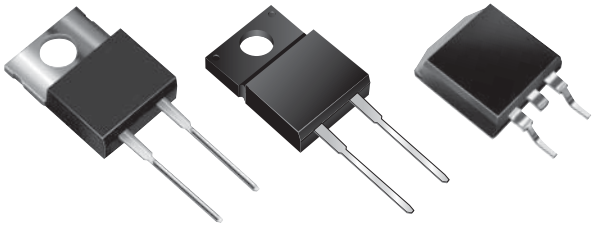
This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

New Product

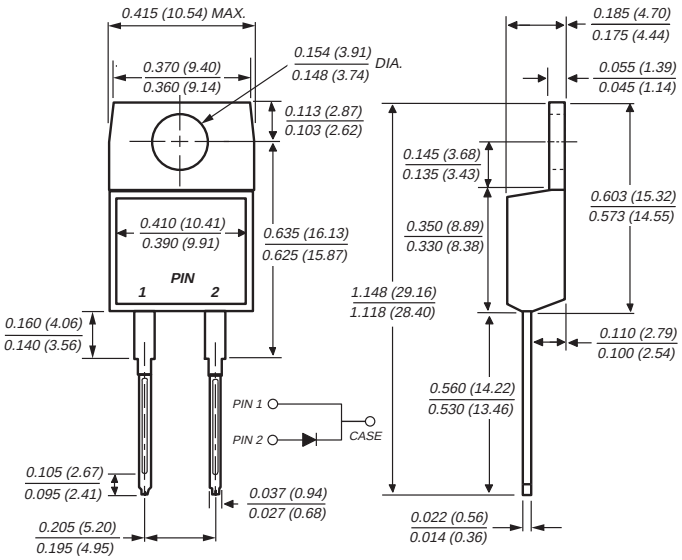
Vishay Semiconductors
formerly General Semiconductor

Ultrafast Rectifiers

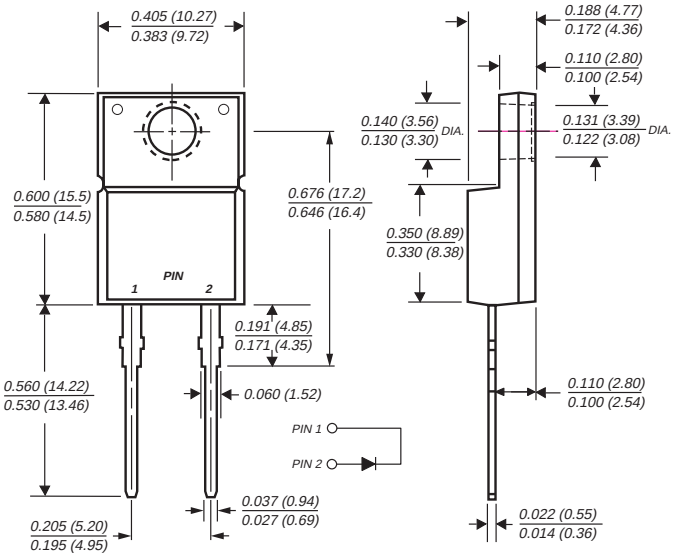


Reverse Voltage 600V
Forward Current 5.0A
Reverse Recovery Time 30ns

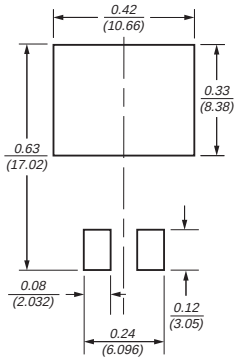
TO-220AC (GUR5H60)



ITO-220AC (GURF5H60)

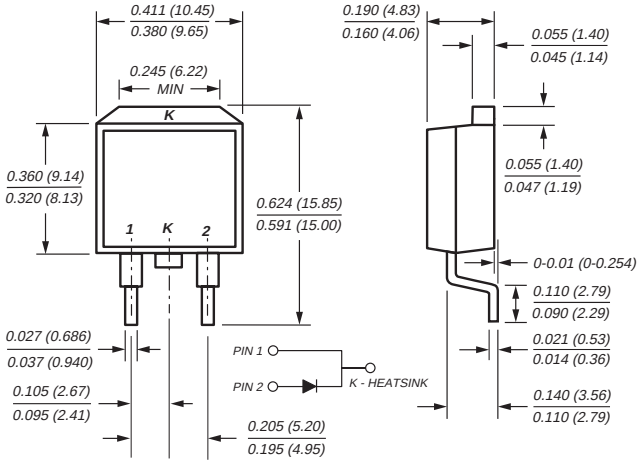


Mounting Pad Layout TO-263AB



Dimensions in inches and (millimeters)

TO-263AB (GURB5H60)



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

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	$R_{\theta JC}$	2	3	2	°C/W

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

Fig. 1 – Forward Current Derating Curve

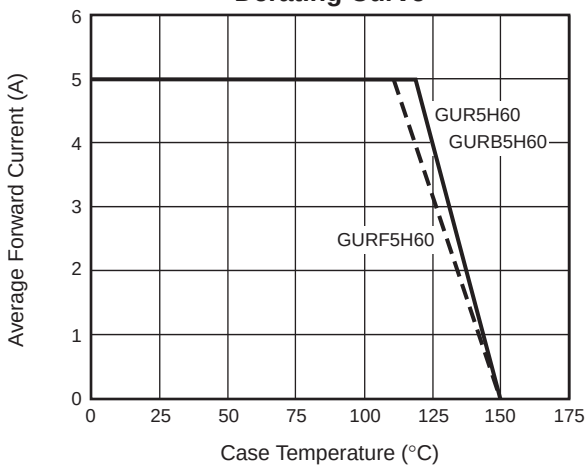


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

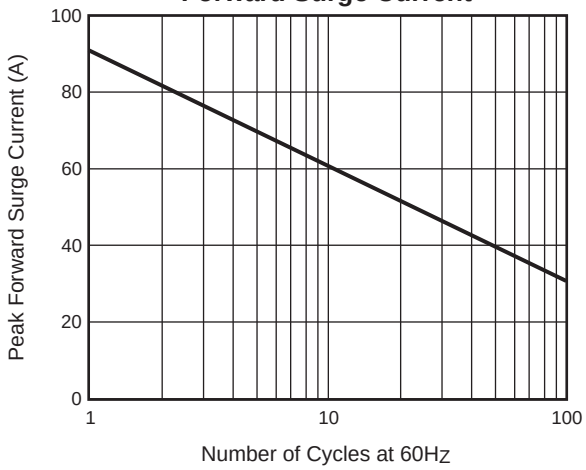


Fig. 3 – Typical Reverse Current

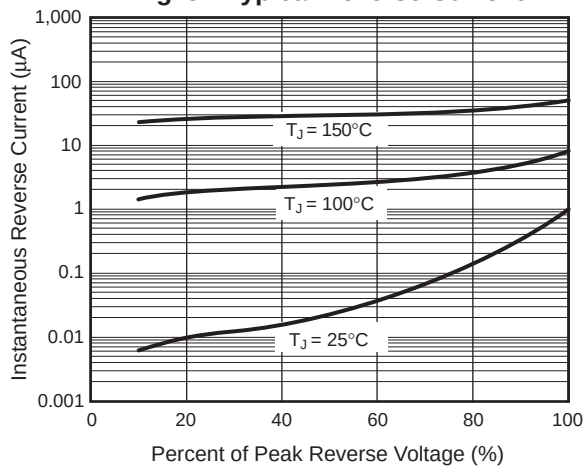


Fig. 4 – Typical Forward Volyage

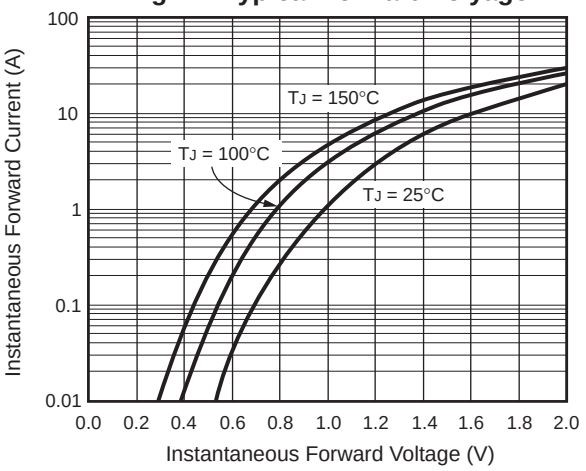


Fig. 5 – Typical Junction Capacitance