

# ANTREX Electronics

## Electronic Components Sourcing Information

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### Product Reference Information

|                      |                                                |
|----------------------|------------------------------------------------|
| <b>Part Number:</b>  | VT760-M3/4W                                    |
| <b>Manufacturer:</b> | Vishay General Semiconductor - Diodes Division |
| <b>Package:</b>      | TO-220-2                                       |
| <b>Availability:</b> | Please confirm with sales                      |

#### Product Page:

<https://antrexco.com/product/details/vishay-general-semiconductor-diodes-division/vt760-m3-4w.html>

#### Request a Quote:

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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:

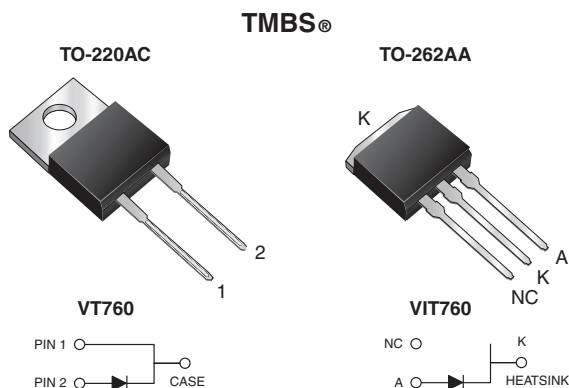
This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

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# Trench MOS Barrier Schottky Rectifier

Ultra Low  $V_F = 0.50\text{ V}$  at  $I_F = 5\text{ A}$



## FEATURES

- Trench MOS Schottky technology
- Low forward voltage drop, low power losses
- High efficiency operation
- Solder bath temperature 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

## TYPICAL APPLICATIONS

For use in high frequency DC/DC converters, switching power supplies, freewheeling diodes, OR-ing diode, and reverse battery protection.

## MECHANICAL DATA

**Case:** TO-220AC and TO-262AA

Molding compound meets UL 94 V-0 flammability rating  
Base P/N-M3 - halogen-free, RoHS-compliant, and commercial grade

**Terminals:** matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

M3 suffix meets JESD 201 class 1A whisker test

**Polarity:** as marked

**Mounting Torque:** 10 in-lbs maximum

## PRIMARY CHARACTERISTICS

|                               |                    |
|-------------------------------|--------------------|
| $I_{F(AV)}$                   | 7.5 A              |
| $V_{RRM}$                     | 60 V               |
| $I_{FSM}$                     | 100 A              |
| $V_F$ at $I_F = 7.5\text{ A}$ | 0.60 V             |
| $T_J$ max.                    | 150 °C             |
| Package                       | TO-220AC, TO-262AA |
| Diode variation               | Single             |

## MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)

| PARAMETER                                                                          | SYMBOL         | VT760       | VIT760 | UNIT       |
|------------------------------------------------------------------------------------|----------------|-------------|--------|------------|
| Maximum repetitive peak reverse voltage                                            | $V_{RRM}$      | 60          |        | V          |
| Maximum average forward rectified current (fig. 1)                                 | $I_{F(AV)}$    | 7.5         |        | A          |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | $I_{FSM}$      | 100         |        | A          |
| Voltage rate of change (rated $V_R$ )                                              | $dV/dt$        | 10 000      |        | V/ $\mu$ s |
| Operating junction and storage temperature range                                   | $T_J, T_{STG}$ | -55 to +150 |        | °C         |

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

| PARAMETER                     | TEST CONDITIONS        |                         | SYMBOL                        | TYP. | MAX. | UNIT |
|-------------------------------|------------------------|-------------------------|-------------------------------|------|------|------|
| Instantaneous forward voltage | I <sub>F</sub> = 5 A   | T <sub>A</sub> = 25 °C  | V <sub>F</sub> <sup>(1)</sup> | 0.58 | -    | V    |
|                               | I <sub>F</sub> = 7.5 A |                         |                               | 0.67 | 0.80 |      |
|                               | I <sub>F</sub> = 5 A   | T <sub>A</sub> = 125 °C |                               | 0.50 | -    |      |
|                               | I <sub>F</sub> = 7.5 A |                         |                               | 0.60 | 0.72 |      |
| Reverse current               | V <sub>R</sub> = 60 V  | T <sub>A</sub> = 25 °C  | I <sub>R</sub> <sup>(2)</sup> | -    | 700  | μA   |
|                               |                        | T <sub>A</sub> = 125 °C |                               | 6.6  | 25   | mA   |

**Notes**(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle(2) Pulse test: Pulse width  $\leq 40\text{ ms}$ **THERMAL CHARACTERISTICS** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

| PARAMETER                  | SYMBOL          | VT760 | VIT760 | UNIT                 |
|----------------------------|-----------------|-------|--------|----------------------|
| Typical thermal resistance | $R_{\theta JC}$ | 3.5   |        | $^{\circ}\text{C/W}$ |

**ORDERING INFORMATION** (Example)

| PACKAGE  | PREFERRED P/N | UNIT WEIGHT (g) | PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
|----------|---------------|-----------------|--------------|---------------|---------------|
| TO-220AC | VT760-M3/4W   | 1.87            | 4W           | 50/tube       | Tube          |
| TO-262AA | VIT760-M3/4W  | 1.45            | 4W           | 50/tube       | Tube          |

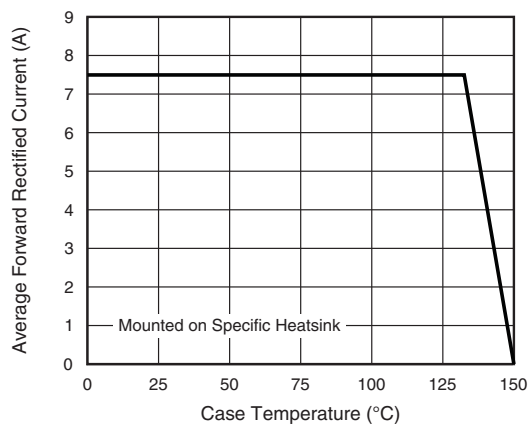
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)


Fig. 1 - Maximum Forward Current Derating Curve

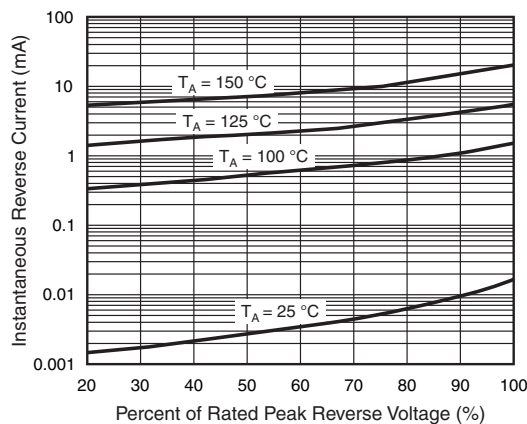


Fig. 4 - Typical Reverse Characteristics

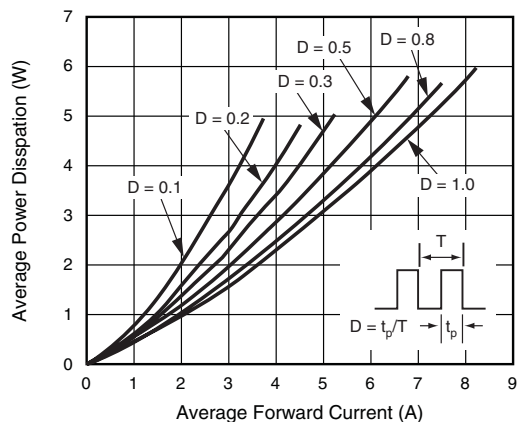


Fig. 2 - Forward Power Dissipation Characteristics

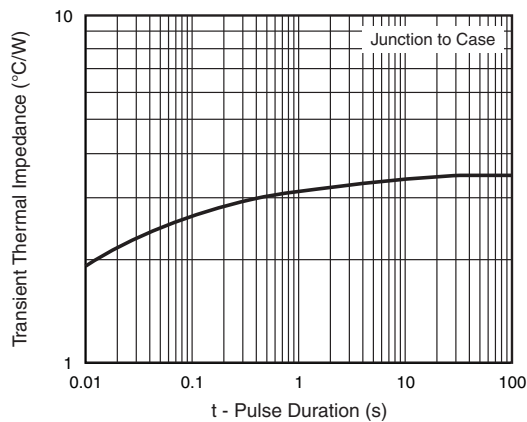


Fig. 5 - Typical Transient Thermal Impedance

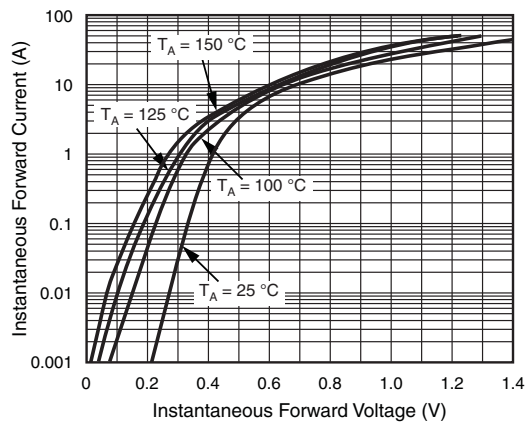


Fig. 3 - Typical Instantaneous Forward Characteristics

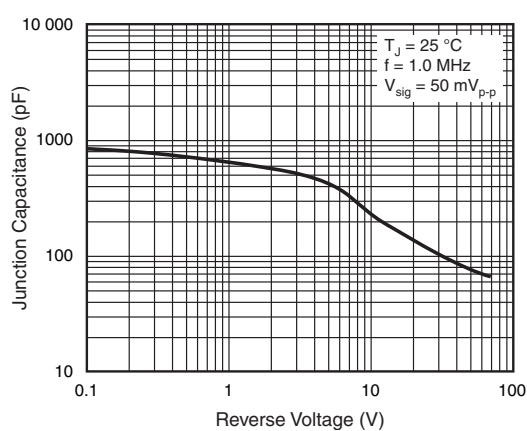
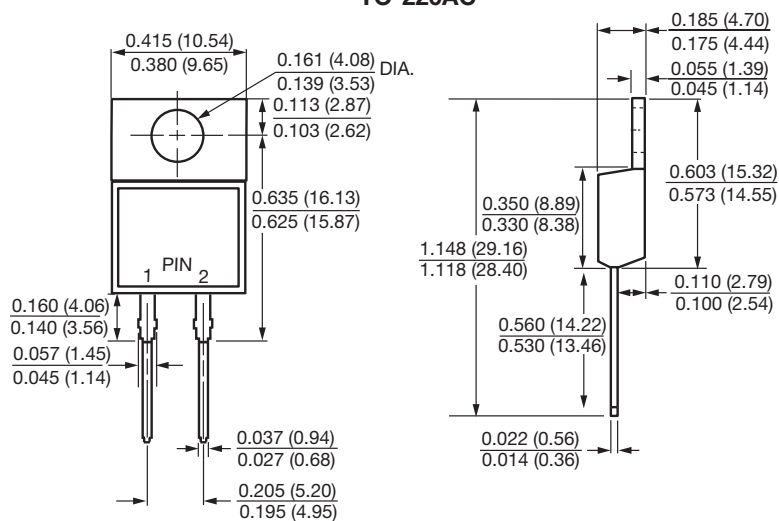


Fig. 6 - Typical Junction Capacitance

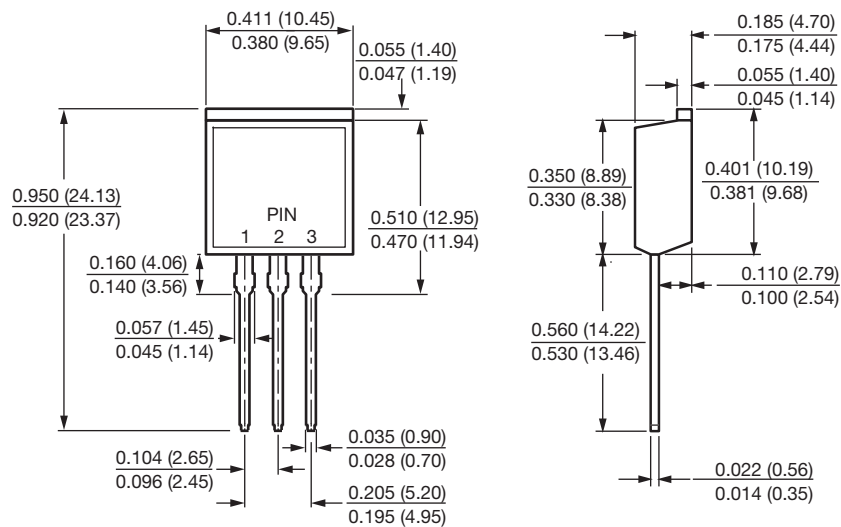


**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**TO-220AC**



**TO-262AA**





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