

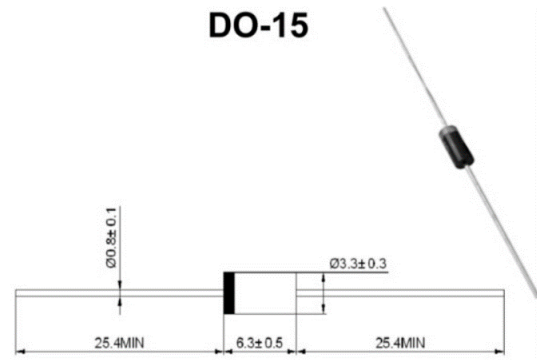
## 40V 3A ULTRA LOW VF TMOS Schottky

### Characteristics Summary

| Characteristics               | Values | Units |
|-------------------------------|--------|-------|
| IF(AV)                        | 3      | A     |
| VRRM                          | 40     | V     |
| VF TYP @ 3A, TJ = 25°C        | 0.36   | V     |
| @ 5A, TJ = 25°C               | 0.41   | V     |
| IR <sub>MAX</sub> @ TJ = 25°C | 100    | uA    |

### Features

- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, Free wheeling, and polarity protection application
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



### Mechanical Data

**Case :** DO-15 molded plastic body

**Terminals :** Plated axial leads, solderable per MIL-STD-750, method 2026

**Polarity :** Color band denotes cathode end

**Mounting Position :** Any

**Weight :** 0.014 ounce, 0.39 grams (approximate)

### Maximum Ratings Characteristics - ( TA = 25°C unless otherwise specified )

| Parameter                                                                             | Symbol           | Values      | Units  |
|---------------------------------------------------------------------------------------|------------------|-------------|--------|
| Maximum repetitive peak reverse voltage                                               | V <sub>RRM</sub> | 40          | V      |
| Maximum RMS voltage                                                                   | V <sub>RMS</sub> | 28          | V      |
| Maximum DC blocking voltage                                                           | V <sub>DC</sub>  | 40          | V      |
| Average Rectified Output Current<br>0.375" (9.5mm) lead length                        | I <sub>O</sub>   | 3.0         | A      |
| Peak forward surge current, 8.3ms single half<br>Sine-wave superimposed on rated load | I <sub>FSM</sub> | 80          | A      |
| Typical thermal resistance (Note 1)                                                   | R <sub>θJA</sub> | 20          | °C / W |
| Operating junction temperature range                                                  | T <sub>J</sub>   | -55 to +150 | °C     |
| Storage temperature range                                                             | T <sub>STG</sub> | -55 to +150 | °C     |

Note 1 : FR-4 PCB, 2 oz Copper. Minimum recommended pad layout

### Electrical Characteristics - ( TA = 25°C unless otherwise specified )

| Parameter       | Test Conditions |            | Symbol | Typ. | Max. | Units |
|-----------------|-----------------|------------|--------|------|------|-------|
| Forward Voltage | IF = 3 A        | TJ = 25°C  | VF*    | 0.36 | 0.40 | V     |
| Reverse Current | VR = 40V        | TJ = 25°C  | IR*    | 70   | 100  | uA    |
|                 |                 | TJ = 100°C |        |      | 20   | mA    |

\* Short duration pulse test used to minimize self-heating effect.



## Characteristics Curves

(  $T_A = 25^{\circ}\text{C}$  unless otherwise specified )

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

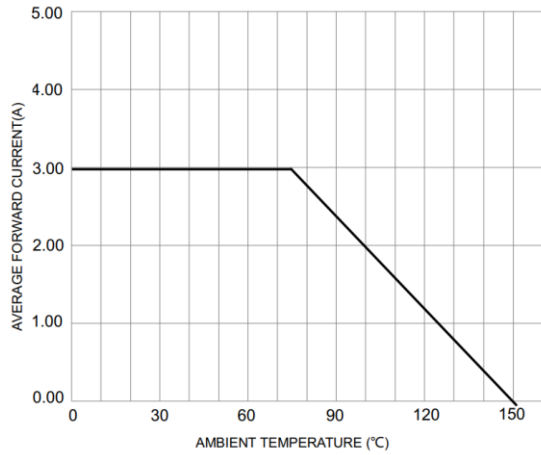


FIG. 2 - TYPICAL FORWARD CHARACTERISTICS

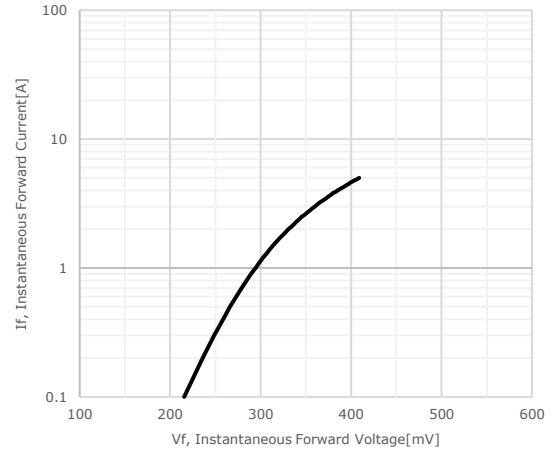


FIG. 3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

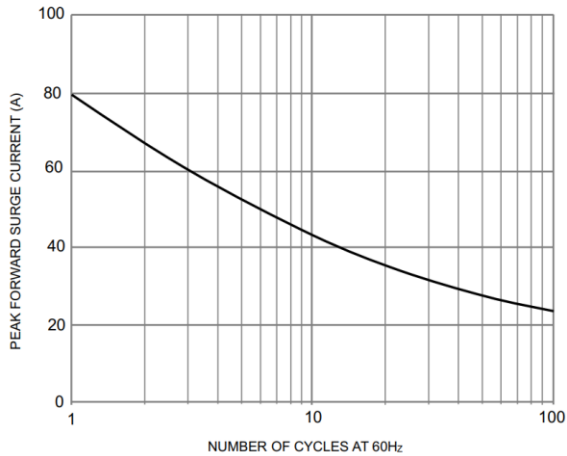
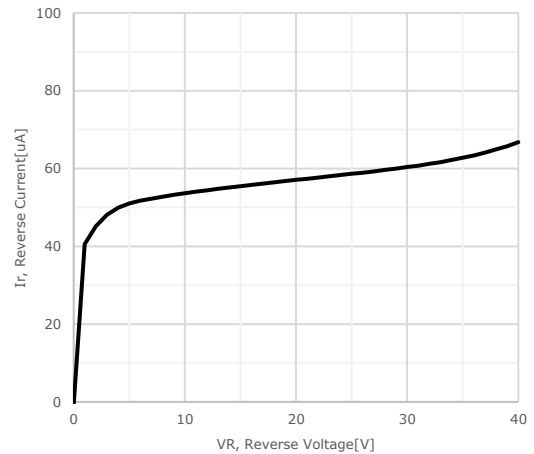


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



## Revision History

| No | Date       | Contents                        |
|----|------------|---------------------------------|
| 0  | 2018-02-23 | Initial Brief Datasheet Release |
|    |            |                                 |
|    |            |                                 |

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