



## DO-27 Plastic-Encapsulate Diodes

### UF5400 THRU UF5408 High Efficient Rectifier Diodes

#### Features

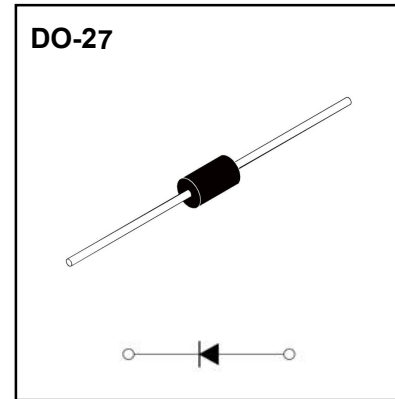
- $I_{F(AV)}$  3.0A
- $V_{RRM}$  50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications

- Rectifier

#### Marking

- UF540X
- X : From 0 To 8



#### Limiting Values(Absolute Maximum Rating)

| Item   | Symbol         | Unit             | Test Conditions   | UF540      |     |     |     |     |     |     |     |      |
|--|----------------|------------------|---|------------|-----|-----|-----|-----|-----|-----|-----|------|
|  |                |                  |   | 0          | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8    |
| Repetitive Peak Reverse Voltage                  | $V_{RRM}$      | V                |   | 50         | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 |
| Maximum RMS Voltage                              | $V_{RMS}$      | V                |   | 35         | 70  | 140 | 210 | 280 | 350 | 420 | 560 | 700  |
| Maximum DC Blocking Voltage                      | $V_{DC}$       | V                |   | 50         | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 |
| Average Forward Current                          | $I_{F(AV)}$    | A                | 60Hz Half-sine wave,<br>Resistance load, $T_L=55^\circ\text{C}$ | 3          |     |     |     |     |     |     |     |      |
| Surge(Non-repetitive)Forward Current             | $I_{FSM}$      | A                | 60Hz Half-sine wave,<br>1 cycle, $T_a=25^\circ\text{C}$         | 150        |     |     |     |     |     |     |     |      |
| Operation Junction and Storage Temperature Range | $T_J, T_{STG}$ | $^\circ\text{C}$ |   | -55 ~ +150 |     |     |     |     |     |     |     |      |

#### Electrical Characteristics ( $T=25^\circ\text{C}$ Unless otherwise specified)

| Item                          | Symbol           | Unit                      | Test Condition  | UF540 |   |   |     |     |   |   |   |
|-------------------------------|------------------|---------------------------|---|-------|---|---|-----|-----|---|---|---|
|                               |                  |                           |   | 0     | 1 | 2 | 3   | 4   | 5 | 6 | 7 |
| Maximum Peak Forward Voltage  | $V_F$            | V                         | $I_F=3.0A$  | 1.0   |   |   | 1.3 | 1.7 |   |   |   |
| Maximum Peak Reverse Current  | $I_{RRM1}$       | $\mu\text{A}$             | $V_{RM}=V_{RRM}$  |       |   |   | 5   |     |   |   |   |
|                               | $I_{RRM2}$       |                           |   |       |   |   | 50  |     |   |   |   |
| Maximum reverse recovery time | $t_{rr}$         | ns                        | $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$                        | 50    |   |   |     | 75  |   |   |   |
| Typical junction capacitance  | $C_J$            | pF                        | Measured at 1MHz and applied reverse voltage of 4.0V D.C. | 45    |   |   |     |     |   |   |   |
| Typical Thermal Resistance    | $R_{\theta J-A}$ | $^\circ\text{C}/\text{W}$ | Between junction and ambient                              | 20    |   |   |     |     |   |   |   |
|                               | $R_{\theta J-L}$ |                           | Between junction and lead                                 | 10    |   |   |     |     |   |   |   |

#### Notes:

Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

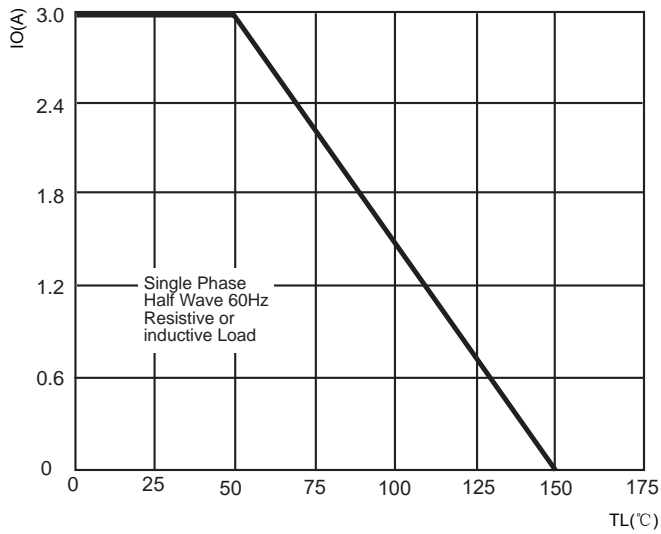


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

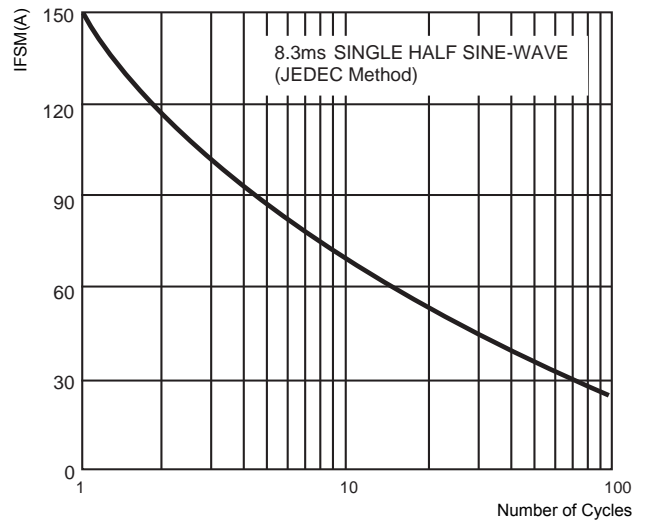


FIG.3: TYPICAL FORWARD CHARACTERISTICS

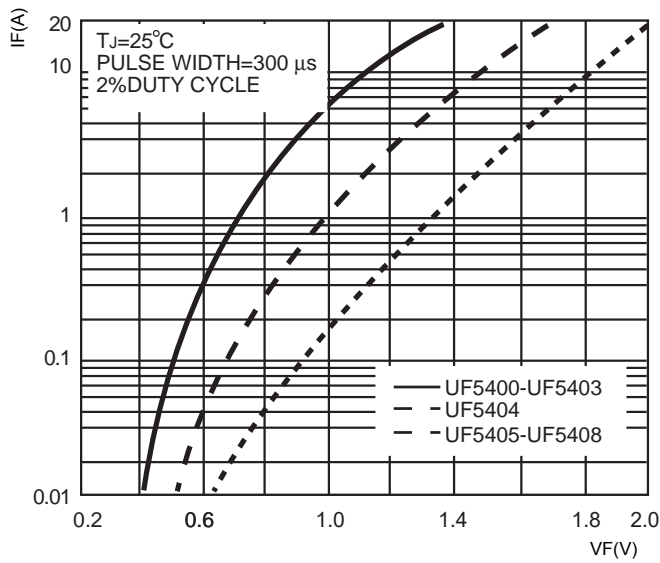


FIG.4: TYPICAL REVERSE CHARACTERISTICS

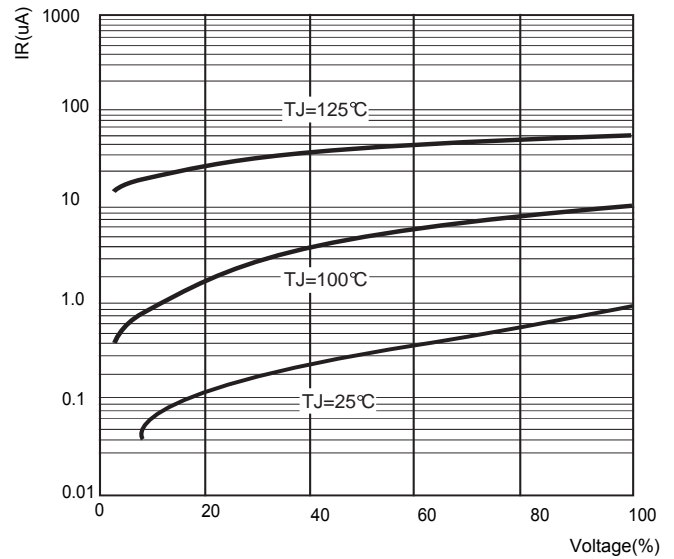
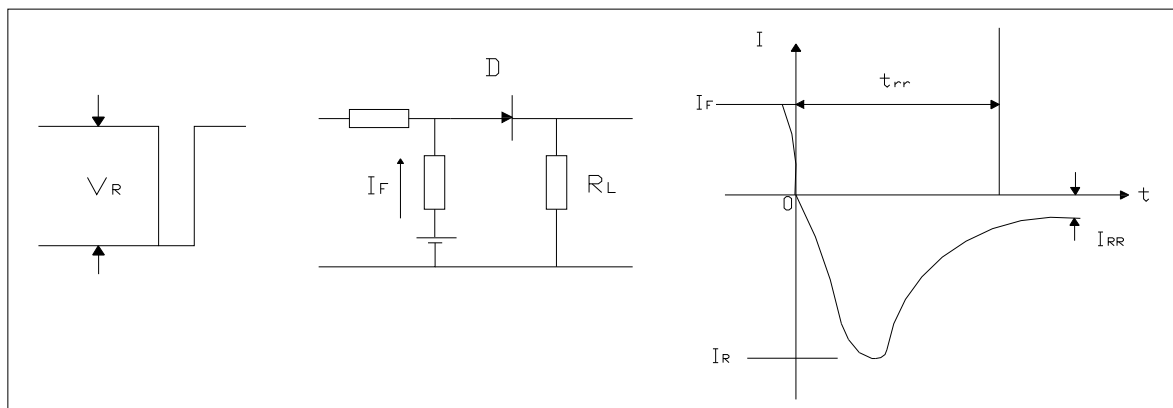
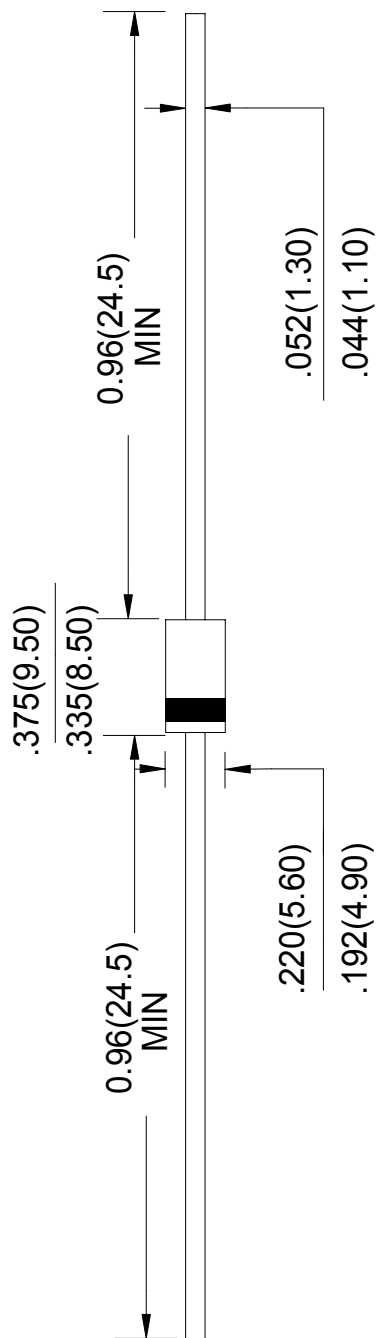


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





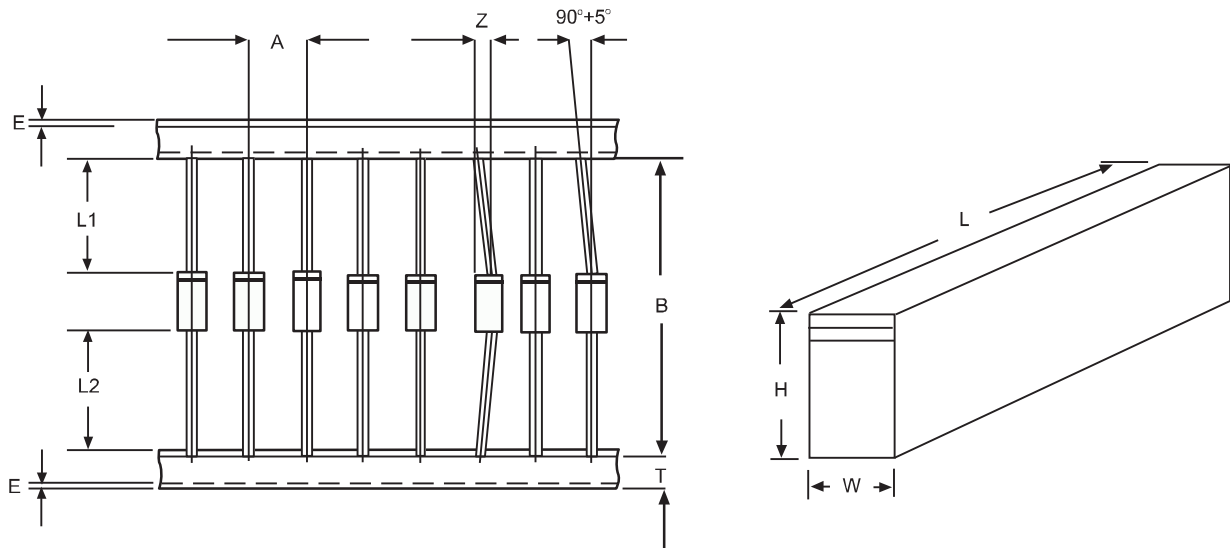
Unit: in inches (millimeters)

NOTICE  
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# Ammo Box Packaging Specifications For Axial Lead Rectifiers

Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below

| COMPONENT OUTLINE | COMPONENT PITCH A          | INNER TAPE PITCH B      | CUMULATIVE PITCH TOLERANCE |
|-------------------|----------------------------|-------------------------|----------------------------|
|                   | $\pm 0.5\text{mm}(.020'')$ | $+0.5\text{mm}(.020'')$ |                            |
| R-1               | 5.0mm                      | 26.0mm                  | 2.0mm/20pitch              |
| R-1               | 5.0mm                      | 52.4mm                  | 2.0mm/10pitch              |
| A-405             | 5.0mm                      | 26.0mm                  | 2.0mm/20pitch              |
| A-405             | 5.0mm                      | 52.4mm                  | 2.0mm/10pitch              |
| DO-34/DO-35       | 5.0mm                      | 26.0mm                  | 2.0mm/20pitch              |
| DO-34/DO-35       | 5.0mm                      | 52.4mm                  | 2.0mm/10pitch              |
| DO-41             | 5.0mm                      | 26.0mm                  | 2.0mm/20pitch              |
| DO-41             | 5.0mm                      | 52.4mm                  | 2.0mm/10pitch              |
| DO-15             | 5.0mm                      | 52.4mm                  | 2.0mm/10pitch              |
| DO-27             | 10.0mm                     | 52.4mm                  | 2.0mm/10pitch              |
| R-6               | 10.0mm                     | 52.4mm                  | 2.0mm/10pitch              |



| ITEM                | SYMBOL    | SPECIFICATIONS(mm) | SPECIFICATIONS(inch) |
|---------------------|-----------|--------------------|----------------------|
| Component alignment | Z         | 1.2max             | 0.048max             |
| Tape width          | T         | $6.0\pm 0.4$       | $0.236\pm 0.016$     |
| Exposed adhesive    | E         | 0.8max             | 0.032max             |
| Body eccentricity   | $ L1-L2 $ | 1.0max             | 0.040max             |
| Box length          | L         | $255.0\pm 5.0$     | $10.04\pm 0.197$     |
| Box width           | W         | $78.0\pm 5.0$      | $3.07\pm 0.197$      |
| Box height          | H         | $150.0\pm 5.0$     | $5.91\pm 0.197$      |

NOTE: Each component lead shall be sandwiched between tapes for A minimum of 3.2mm(0.126'')