

# UESP05K

## Ultra fast Plastic Power Rectifiers

VOLTAGE: 800V

CURRENT: 5.0A



### FEATURE

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultra fast recovery time for high efficiency
- Excellent high temperature switching
- Glass passivated junction
- High voltage and high reliability
- High speed switching
- Low forward voltage

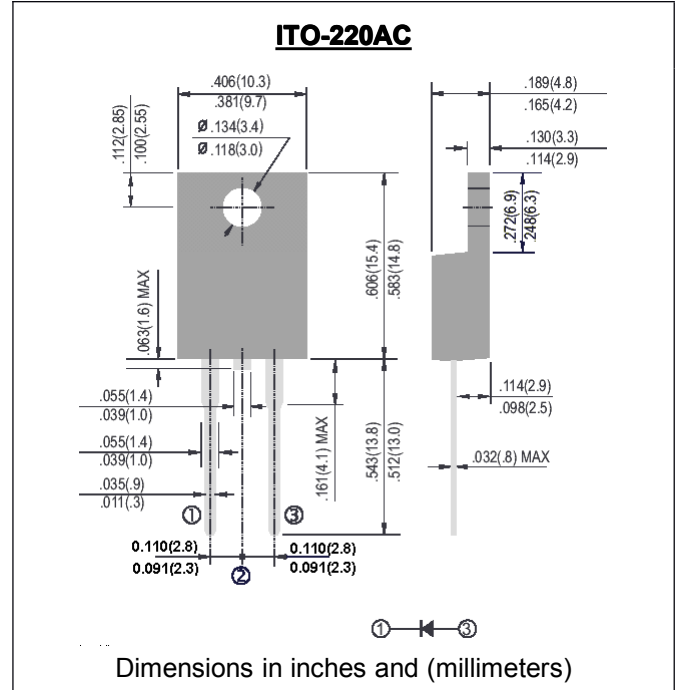
### MECHANICAL DATA

Case: JEDEC TO-220 molded plastic body over passivated chip

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

Polarity: Color band denotes cathode end

Mounting Position: Any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

|  | SYMBOL                            | UESP05K     | units    |
|--|-----------------------------------|-------------|----------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>rrm</sub>                  | 800         | V        |
| Maximum RMS Voltage  | V <sub>rms</sub>                  | 560         | V        |
| Maximum DC blocking Voltage  | V <sub>dc</sub>                   | 800         | V        |
| Maximum Average Forward Rectified<br>at T <sub>c</sub> =100°C                        | I <sub>f(av)</sub>                | 5.0         | A        |
| Peak Forward Surge Current 8.3ms single<br>half sine-wave superimposed on rated load | I <sub>fsm</sub>                  | 60          | A        |
| Maximum Forward Voltage at rated Forward<br>Current and 25°C at 5A                   | V <sub>f</sub>                    | 3.0         | V        |
| Maximum Reverse Recovery Time (Note 1)   | T <sub>rr</sub>                   | 35          | nS       |
| Typical thermal resistance junction to case  | R <sub>θ Jc</sub>                 | 5.0         | °C/W     |
| Maximum DC Reverse Current Ta =25°C<br>at rated DC blocking voltage Ta =125°C        | I <sub>r</sub>                    | 10<br>100   | μA<br>μA |
| Storage and Operating Temperature Range  | T <sub>stg</sub> , T <sub>j</sub> | -55 to +150 | °C       |

#### Note:

1. Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A

# RATINGS AND CHARACTERISTIC CURVES UESP05K

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

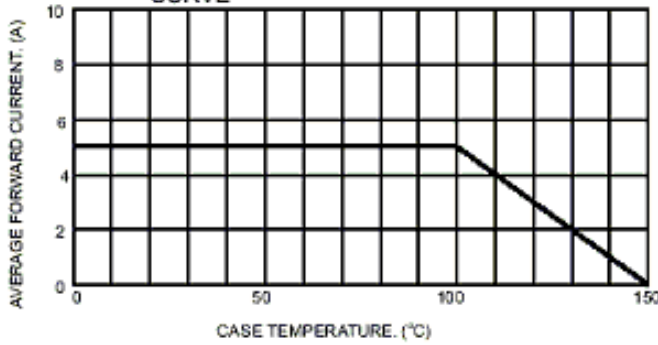


FIG.2- TYPICAL REVERSE CHARACTERISTICS

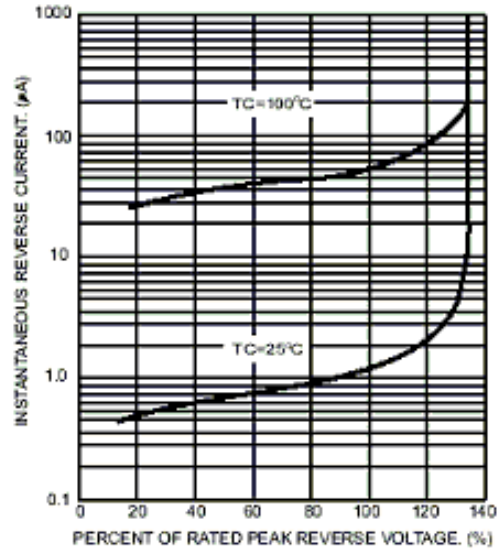


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

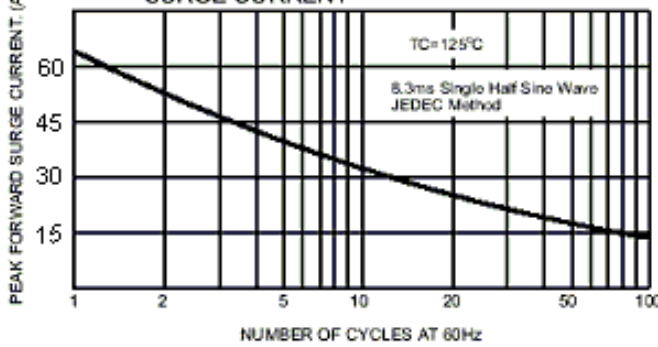


FIG.5- TYPICAL FORWARD CHARACTERISTICS

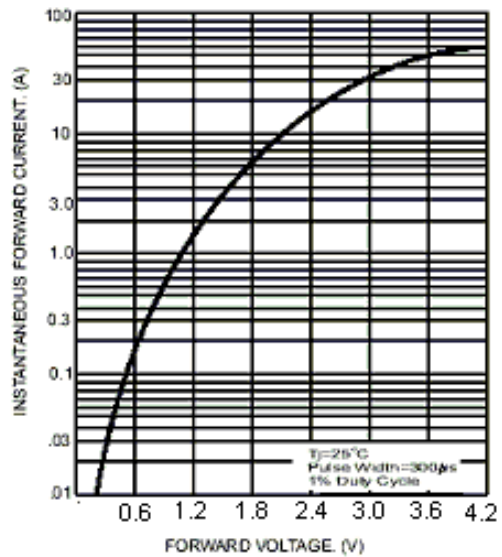


FIG.4- TYPICAL JUNCTION CAPACITANCE

