

# **P6KEG SERIES**

# **Transient Voltage Suppressors Diodes**

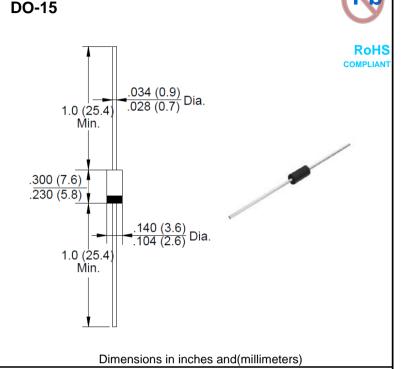
# Reverse Voltage - 24 to 30 Volts power dissipation - 600 Watts

#### **Features**

- low leakage
- Uni and bidirectional unit
- Excellent clamping capability
- Fast response time
- AEC-Q101 qualified

## **Mechanical Data**

●Case : Molded Plastic



## **Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Characteristics                                    | Symbol | VALUE          | Unit       |  |
|--|--------|----------------|------------|--|
| Peak power dissipation with a 10/1000us waveform   | РРРМ   | 600            | W          |  |
| Peak pulse current with a 10/1000us waveform       | ІРРМ   | See Next Table | А          |  |
| Maximum instantaneous forward Voltage (1)          | VF     | 3.5/5.0        | V          |  |
| Thermal resistance junction to lead                | Rejl   | 20             | °C/W       |  |
| Thermal resistance junction to ambient             | Reja   | 75             |            |  |
| Power dissipation on infinite heat sink at TL=75°C | PD     | 5              | W          |  |
| Peak Forward Surge Current                         |        |                |            |  |
| 8.3ms Single Half Sine-Wave                        | IFSM   | 100            | А          |  |
| Super Imposed on Rated Load (JEDEC Method)         |        |                |            |  |
| Operating Temperature Range                        | TJ     | -55 to + 150   | $^{\circ}$ |  |
| Storage Temperature Range                          | Тѕтс   | -55 to + 150   | °C         |  |

NOTES:1.VF = 3.5 V for P6KE220(A) and below; VF = 5.0 V for P6KE250(A) and above



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| ſ |                   | Part      |        | Breakdown Voltage VвR@Iт |        |                         | VRWM Working<br>Peak Reverse | Maximum<br>Reverse Surge | Maximum<br>Clamping |
|---|-------------------|-----------|--------|--------------------------|--------|-------------------------|------------------------------|--------------------------|---------------------|
|   | Part Number(U ni) |           | Min(V) | Max (V)                  | IT(mA) | Reverse<br>Leakage IR @ | Voltage                      | Current IPP              | Voltage Vc          |
|   | P6KEG24A          | P6KEG24CA | 22.8   | 25.2                     | 1.0    | 5.0                     | 20.5                         | 18.1                     | 33.2                |
| ſ | P6KEG30A          |           | 28.5   | 31.5                     | 1.0    | 5.0                     | 25.6                         | 14.5                     | 41.4                |

## **Rating and Characteristic Curves**



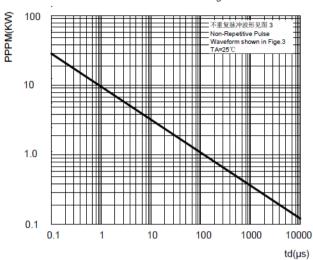


FIG3: Pulse Waveform

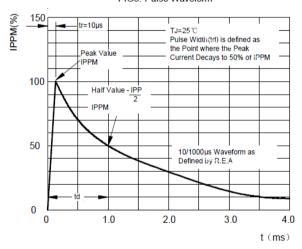


FIG5: Maximum Non-Repetitive Surge Current

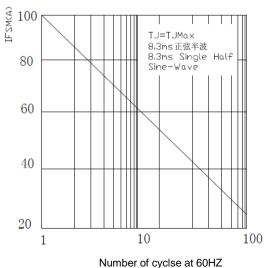


FIG2: Pulse Power or Current vs.InItlal Junction Temperature

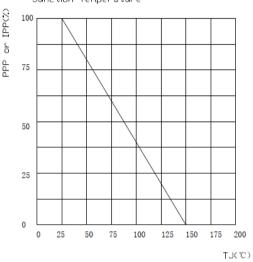


FIG4: Power Derating Curve

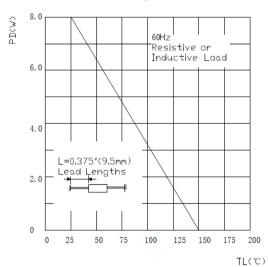
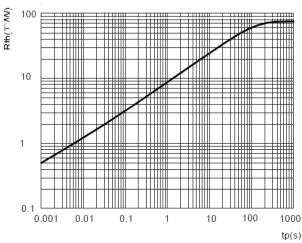


FIG6:Typical Transient Thermal Impedance



The curve above is for reference only.



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