## FEATURES

- Glass passivated junction.
- 8000W Peak Pulse Power capability at 10×1000μs waveform，repetition rate（duty cycles）：0.01%.
- Excellent clamping capability.
- Fast response time
- Low leakage.

## MECHANICAL DATA

- Case: Molded plastic over glass passivated junction.
- Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026.
- Polarity : Color band denotes cathode except bipolar.
- Weight : 2.5 grams.

## DEVICES FOR BIPOLAR APPLICATIONS

- Bidirectional types use A orCA suffix.
- Electrical Characteristics apply in both directions.

## MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

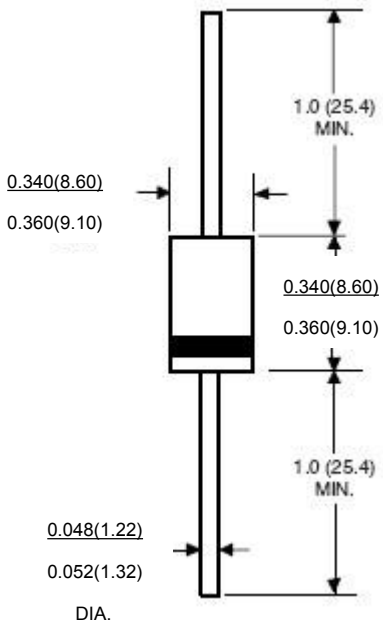
| Type Number | Symbol | Value | Units |
|---|---|---|---|
| Peak Pulse Power Dissipation by 10×1000 μs test waveform （Fig.1）（Note 1） | $P_{PPM}$ | 8000 | Watts |
| Steady State Power Dissipation on inifinite heat sink at $T_L$= 75°C（Fig.5） | $P_D$ | 8.0 | |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Unidirectional only (Note 2) | $I_{FSM}$ | 500 | A |
| Operating Junction and Storage Temperature Range | $T_J$, $T_{STG}$ | -55 to + 150 | °C |

Notes: Notes: 1. Non-repetitive current pulse and derated above $T_A$= 25°C.

2. 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.

## PACKAGE DIMENSIONS

**P600**




## ORDERING INFORMATION

8KP □□□ C A

- A — 5% Voltage Tolerance
- C — Bi-Directional
- □□□ — Voltage

## PACKAGING

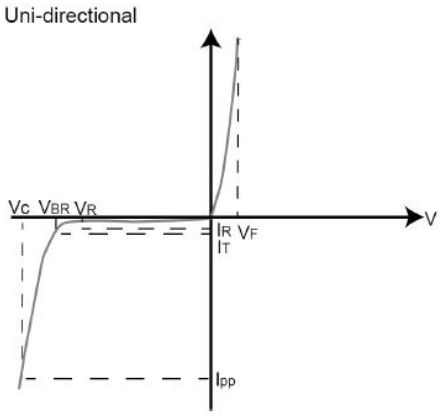
| Part Number | Component Package | Quantity |
|---|---|---|
| 8KP36CA | P600 | 300 |

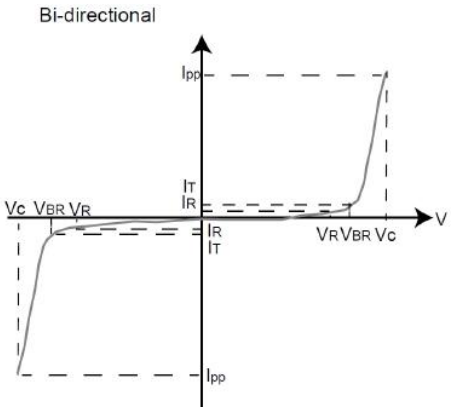
# ELECTRICAL CHARACTERISTICS

| 8KP DEVICES | REVERSE STAND-OFF VOLTAGE $V_{RWM}$(v) | BREAKDOWN VOLTAGE Min.@$I_T$ $V_{BR}$ $_{Min.}$(V) | BREAKDOWN VOLTAGE Max.@$I_T$ $V_{BR}$ $_{Max.}$(V) | TEST CURRENT $I_T$(mA) | MAXIMUM CLAMPING VOLTAGE @$I_{pp}$ $V_C$(V) | PEAK PULSE CURRENT $I_{pp}$(A) | REVERSE LEAKAGE @$V_{RWM}$ $I_R$(uA) |
|---|---|---|---|---|---|---|---|
| 8KP36CA | 36 | 40 | 44.2 | 1 | 58.1 | 148 | 5 |

Notes:For bidirectional type having VRWM of 30 volts and less，the IR limit is double.

## TYPICAL CHARACTERISTICS



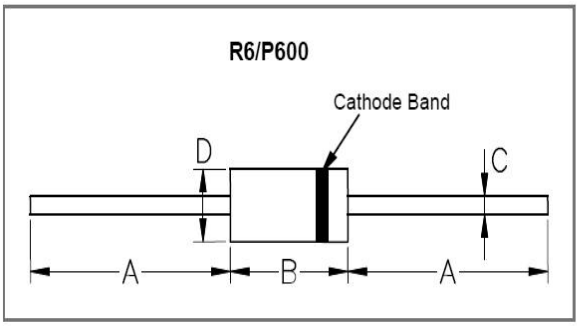

### Physical Specification

| | |
|---|---|
| Weight | 0.07 ounce, 2.1gram |
| Case | JEDEC R-6/P600 Molded Plastic over glass passivated junction |
| Polarity | Color band denotes cathode except Bipolar |
| Terminal | Matte Tin-plated leads, Solderable per JESD22-B102D |

### Environmental Specification

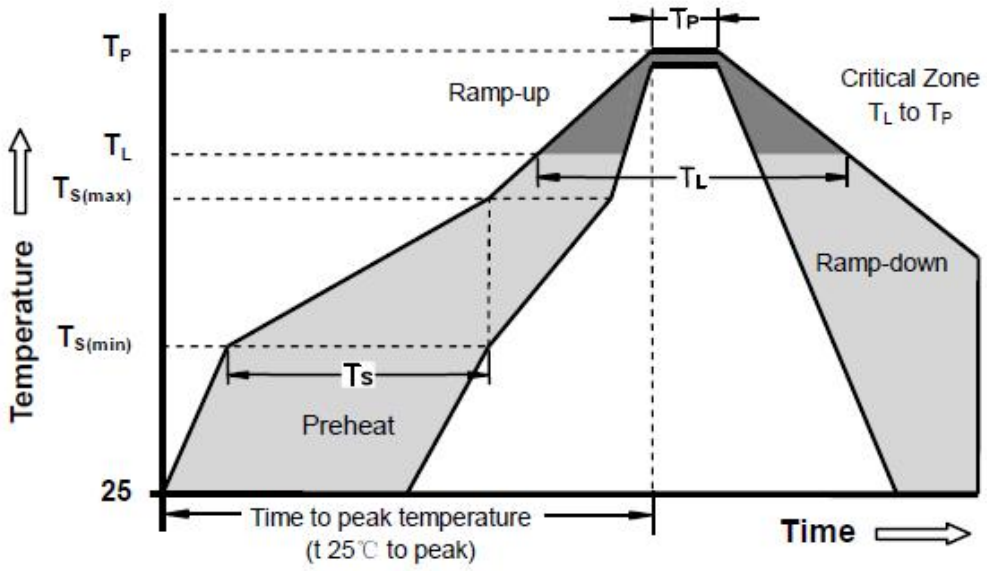
| | |
|---|---|
| Temperature Cycle | JESD22-A104 |
| Pressure Cooker | JESD22-A102 |
| High Temp. Storage | JESD22-A103 |
| HTRB | JESD22-A108 |
| Thermal Shock | JESD22-A106 |

## Dimensions




| Dimensions | Inches | | Millimeters | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 1.000 | - | 25.40 | - |
| B | 0.340 | 0.360 | 8.64 | 9.14 |
| C | 0.048 | 0.052 | 1.22 | 1.32 |
| D | 0.340 | 0.360 | 8.64 | 9.14 |

## Soldering Parameters




| Reflow Condition | | Lead–free assembly |
|---|---|---|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | 150°C |
| | -Temperature Max ($T_{s(max)}$) | 200°C |
| | - Time (min to max) ($T_s$) | 60 -180 Seconds |
| Average ramp up rate ( Liquidus Temp $T_L$) to peak | | 3°C/second max |
| $T_{S(max)}$ to TL - Ramp-up Rate | | 3°C/second max |
| Reflow | - Temperature ($T_L$) (Liquidus) | 217°C |
| | - Time (min to max) ($T_L$) | 60 -150 Seconds |
| Peak Temperature ($T_P$) | | 260 +0/-5°C |
| Time within 5°C of actual peak Temperature ($t_p$) | | 20 -40 Seconds |
| Ramp-down Rate | | 6°C/second max |
| Time 25°C to peak Temperature ($T_P$) | | 8 minutes Max |
| Do not exceed | | 280°C |