

20KPA SERIES

Glass Passivated Junction TVS

**STAND-OFF VOLTAGE-20 TO 300 Volts
20000 Watt Peak Pulse Power**

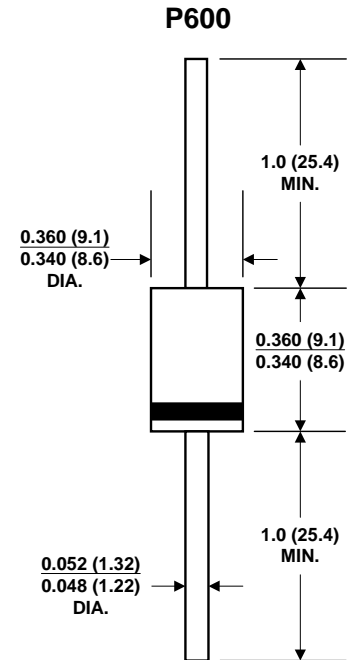


Features

- ✧ Plastic package
- ✧ Glass passivated junction
- ✧ 20000W Peak Pulse Power capability on 10/1000 μ s waveform
- ✧ Excellent clamping capability
- ✧ Repetition rate (duty cycle) : 0.05%
- ✧ Low incremental surge resistance
- ✧ Fast response time: typically less than 1.0ps from 0 Volts to BV, Bidirectional less than 10 ns
- ✧ High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 51bs.(2.3kg) tension

Mechanical Data

- ✧ **Case:** Molded plastic over glass passivated junction
- ✧ **Terminal:** Plated Axial Leads , solderable per MIL-STD-750 , Method 2026
- ✧ **Polarity:** Color band denoted positive end (cathode) except Bipolar
- ✧ **Mounting Position:** Any
- ✧ **Weight:** 0.07 ounce, 2.5 gram



Dimensions in inches and (millimeters)

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 20KPA 20 thru types 20KPA 300.(e.g. 20KPA20C, 20KPA300CA)
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| RATING | SYMBOL | VALUE | UNITS |
|--|-------------------|------------------|-------|
| Peak Pulse Power Dissipation on 10/ 1000 μ s waveform | P_{PPM} | Minimum 20000 | Watts |
| Peak Pulse Current of on 10-1000 μ s waveform | I_{PPM} | SEE TABLE 1 | Amps |
| Steady State Power Dissipation at T1= 75°C Lead Lengths. 375", (9.5mm) | P_M (AV) | 8 | Watts |
| Peak Forward Surge Current, 1/20 second / 25 (JEDEC Method) | I_{FSM} | 400 | Amps |
| Operatings and Storage Temperature Range | T_J , T_{STG} | -55 to +175 | °C |

| 20KPA PART NUMBER | | REVERSE STAND- OFF VOLTAGE $V_{RWM}(V)$ | BREAKDOWN VOLTAGE $V_{BR}(V)$ MIN. @ I_T | BREAKDOWN VOLTAGE $V_{BR}(V)$ MAX. @ I_T | TEST CURRENT I_T (mA) | PEAK PULSE CURRENT I_{pp} (A) | REVERSE LEAKAGE @ V_{RWM} $I_R(\mu$ A) | MAXIMUN CLAMPING VOLTAGE @ I_{PP} V_C (V) |
|----------------------|------------|--|---|---|----------------------------------|--|---|--|
| UNI-POLAR | BI-POLAR | | | | | | | |
| 20KPA20A | 20KPA20CA | 20 | 22.34 | 24.38 | 50 | 548.9 | 5000 | 36.8 |
| 20KPA24A | 20KPA24CA | 24 | 26.81 | 29.26 | 50 | 490.3 | 5000 | 41.2 |
| 20KPA26A | 20KPA26CA | 26 | 29.04 | 31.69 | 50 | 451.9 | 2000 | 44.7 |
| 20KPA28A | 20KPA28CA | 28 | 31.28 | 34.13 | 50 | 420.8 | 1000 | 48.0 |
| 20KPA30A | 20KPA30CA | 30 | 33.51 | 36.57 | 5 | 392.2 | 250 | 51.5 |
| 20KPA32A | 20KPA32CA | 32 | 35.74 | 39.01 | 5 | 372.0 | 150 | 54.3 |
| 20KPA34A | 20KPA34CA | 34 | 38.0 | 41.4 | 5 | 351.3 | 50 | 57.5 |
| 20KPA36A | 20KPA36CA | 36 | 40.2 | 43.9 | 5 | 328.5 | 20 | 61.5 |
| 20KPA40A | 20KPA40CA | 40 | 44.7 | 48.8 | 5 | 297.9 | 15 | 67.8 |
| 20KPA44A | 20KPA44CA | 44 | 49.1 | 53.6 | 5 | 277.9 | 10 | 72.7 |
| 20KPA48A | 20KPA48CA | 48 | 53.6 | 58.5 | 5 | 254.4 | 10 | 79.4 |
| 20KPA52A | 20KPA52CA | 52 | 58.1 | 63.4 | 5 | 235.4 | 10 | 85.8 |
| 20KPA56A | 20KPA56CA | 56 | 62.6 | 68.3 | 5 | 218.1 | 10 | 92.6 |
| 20KPA60A | 20KPA60CA | 60 | 67.0 | 73.1 | 5 | 207.0 | 10 | 97.6 |
| 20KPA64A | 20KPA64CA | 64 | 71.5 | 78.0 | 5 | 194.2 | 10 | 104.0 |
| 20KPA68A | 20KPA68CA | 68 | 76.0 | 82.9 | 5 | 183.6 | 10 | 110.0 |
| 20KPA72A | 20KPA72CA | 72 | 80.4 | 87.8 | 5 | 174.1 | 10 | 116.0 |
| 20KPA80A | 20KPA80CA | 80 | 89.4 | 97.5 | 5 | 155.4 | 10 | 130.0 |
| 20KPA88A | 20KPA88CA | 88 | 98.3 | 107.3 | 5 | 142.3 | 10 | 142.0 |
| 20KPA96A | 20KPA96CA | 96 | 107.2 | 117.0 | 5 | 130.3 | 10 | 155.0 |
| 20KPA104A | 20KPA104CA | 104 | 116.2 | 126.8 | 5 | 120.2 | 10 | 168.0 |
| 20KPA112A | 20KPA112CA | 112 | 125.1 | 136.5 | 5 | 111.0 | 10 | 182.0 |
| 20KPA120A | 20KPA120CA | 120 | 134.0 | 146.3 | 5 | 104.1 | 10 | 194.0 |
| 20KPA132A | 20KPA132CA | 132 | 147.4 | 160.9 | 5 | 94.8 | 10 | 213.0 |
| 20KPA144A | 20KPA144CA | 144 | 160.8 | 175.5 | 5 | 87.1 | 10 | 232.0 |
| 20KPA160A | 20KPA160CA | 160 | 178.7 | 195.0 | 5 | 78.3 | 10 | 258.0 |
| 20KPA172A | 20KPA172CA | 172 | 192.1 | 209.7 | 5 | 72.9 | 10 | 277.0 |
| 20KPA180A | 20KPA180CA | 180 | 201.1 | 219.4 | 5 | 69.4 | 10 | 291.0 |
| 20KPA192A | 20KPA192CA | 192 | 214.5 | 234.0 | 5 | 65.4 | 10 | 309.0 |
| 20KPA204A | 20KPA204CA | 204 | 227.9 | 248.7 | 5 | 61.4 | 10 | 329.0 |
| 20KPA216A | 20KPA216CA | 216 | 241.3 | 263.3 | 5 | 58.0 | 10 | 348.0 |
| 20KPA232A | 20KPA232CA | 232 | 259.1 | 282.8 | 5 | 54.0 | 10 | 374.0 |
| 20KPA240A | 20KPA240CA | 240 | 268.1 | 292.6 | 5 | 52.2 | 10 | 387.0 |
| 20KPA256A | 20KPA256CA | 256 | 286.0 | 312.1 | 5 | 49.0 | 10 | 412.0 |
| 20KPA280A | 20KPA280CA | 280 | 312.8 | 341.3 | 5 | 44.8 | 10 | 451.0 |
| 20KPA300A | 20KPA300CA | 300 | 335.1 | 365.7 | 5 | 41.8 | 10 | 483.0 |

For bidirectional type having V_{RWM} of 40 volts and less, the IR limit is double.

For parts without A , the V_{BR} is $\pm 10\%$