

# 1.5KE180CAS - 220CAS

# BI-DIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR

**V<sub>BR</sub> : 180 - 220 Volts**

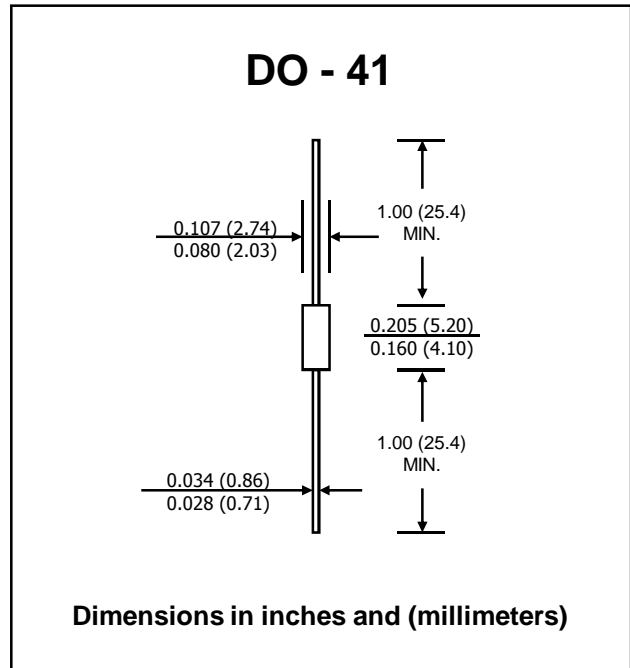
**P<sub>PK</sub> : 1500 Watts**

**FEATURES :**

- \* 1500W surge capability at 1ms
- \* Excellent clamping capability
- \* Low zener impedance
- \* Fast response time : typically less than 1.0 ps from 0 volt to VBR(min.)
- \* **Pb / RoHS Free**

**MECHANICAL DATA**

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
- \* Mounting position : Any
- \* Weight : 0.339 gram



**MAXIMUM RATINGS** (Rating at 25 °C ambient temperature unless otherwise specified)

Rating	Symbol	Value	Unit
Peak Power Dissipation at Ta = 25 °C, Tp=1ms (Note1)	P <sub>PK</sub>	Minimum 1500	W
Steady State Power Dissipation at T <sub>L</sub> = 75 °C	P <sub>D</sub>	5.0	W
Lead Lengths 0.375", (9.5mm) (Note 2)			
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 65 to + 175	°C

**ELECTRICAL CHARACTERISTICS** (Rating at 25 °C ambient temperature unless otherwise specified)

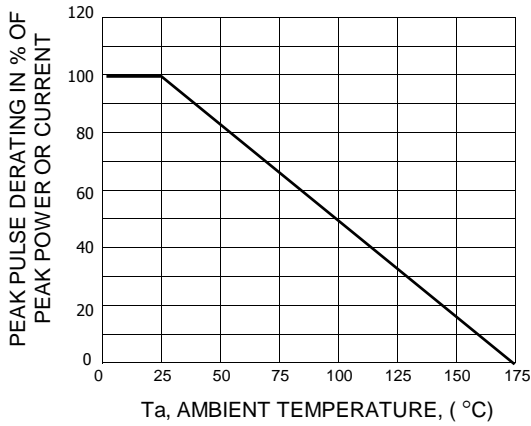
TYPE	Breakdown Voltage @ I <sub>t</sub> ( Note 3 )		Working Peak Reverse Voltage V <sub>RWM</sub> (V)	Maximum Reverse Leakage @ V <sub>RWM</sub> I <sub>R</sub> (μA)	Maximum Reverse Current I <sub>RSM</sub> (A)	Maximum Clamping Voltage @ I <sub>RSM</sub> V <sub>RSM</sub> (V)	Maximum Temperature Co-efficient of V <sub>BR</sub> (% / °C)	
	V <sub>BR</sub> (V)							
	Min.	Max.						
1.5KE180CAS	171	189	1.0	154	1.0	6.1	246	0.108
1.5KE200CAS	190	210	1.0	171	1.0	5.5	274	0.108
1.5KE220CAS	209	231	1.0	185	1.0	4.6	328	0.108

**Notes :**

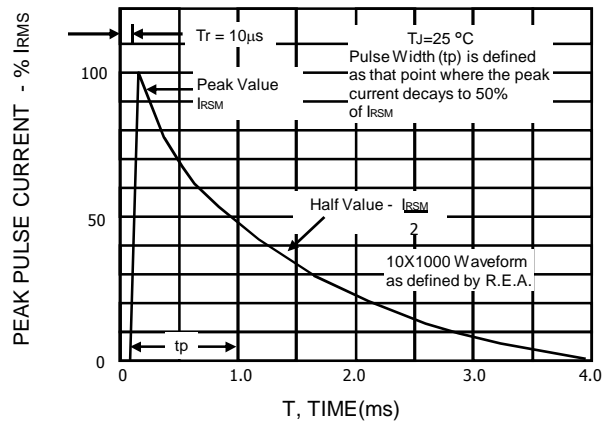
- (1) Non-repetitive Current pulse, per Fig. 2 and derated above Ta = 25 °C per Fig. 1
- (2) Mounted on Copper Leaf area of 1.57 in<sup>2</sup> (40mm<sup>2</sup>).
- (3) V<sub>BR</sub> measured after I<sub>t</sub> applied for 300 μs., I<sub>t</sub> = square wave pulse or equivalent.
- (4) "1.5" will be omitted in marking on the diode.

**RATING AND CHARACTERISTIC CURVES ( 1.5KE180CAS - 220CAS )**

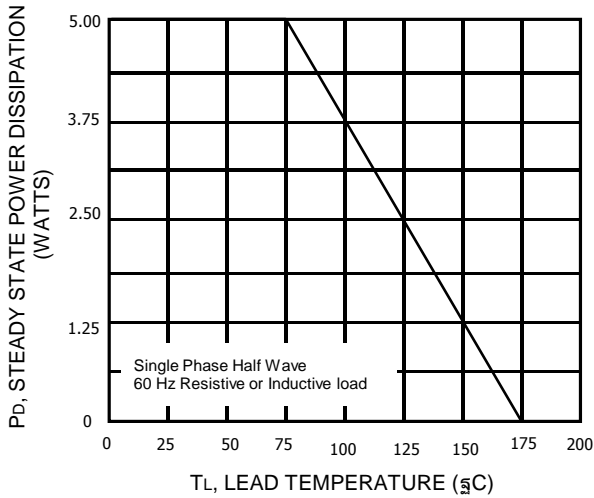
**FIG.1 - PULSE DERATING CURVE**



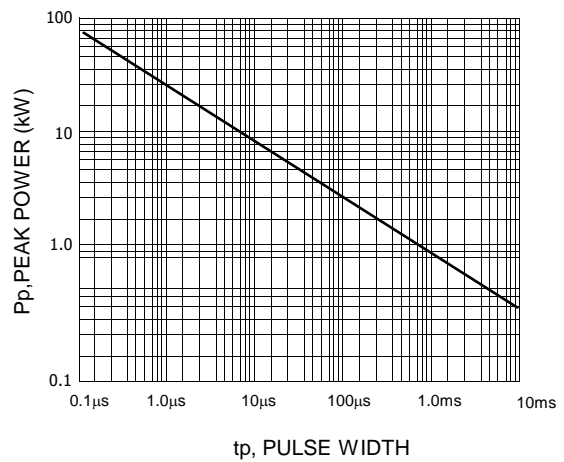
**FIG.2 - PULSE WAVEFORM**



**FIG.3 - STEADY STATE POWER DERATING**



**FIG.4 - PULSE RATING CURVE**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

