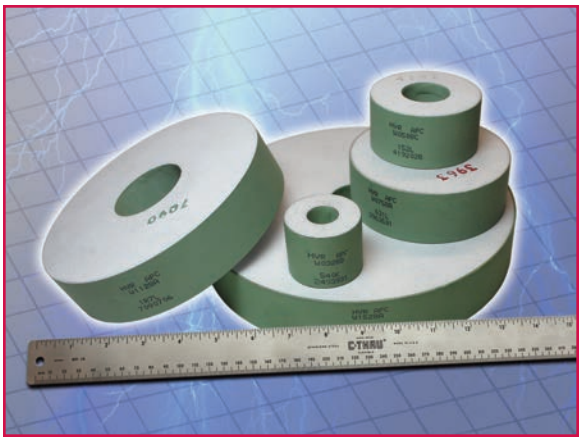


Highest Surge Energy

Extremely High Voltage

Non-Inductive

High Energy Disk resistors offer unsurpassed performance in high energy and high voltage applications. These non-inductive, ceramic composite resistors are designed for pulse shaping, crowbar, capacitor charge/discharge… any application requiring low inductance along with extremes of voltage and energy. They are ideally suited for use in pulsed power systems, where these resistors distribute energy uniformly throughout their structure for low thermal stress. The standard, high-temperature silicone coating enhances high voltage performance in air. Optional configurations optimize performance in other gaseous or fluid dielectrics. These resistors are also available as a solid disk without center bore, ("D" series).

Part Number	O.D. (mm)	I.D. (mm)	Thickness[1] (mm)	Energy[2] (K Joules)	Impulse Volts[3] (kVolts)	Resistance (Ohms)
W0328DXXXX	32	11	25.4	5.0	18.7	2.0 – 10K
W0508CXXXX	50	20	25.4	12	20.4	1.0 – 3.3K
W0758AXXXX	75	26	25.4	25	23.3	0.5 – 1.0K
W1128BXXXX	112	34	25.4	67	26.2	0.2 – 390
W1528AXXXX	152	26	25.4	110	28.3	0.10 – 100

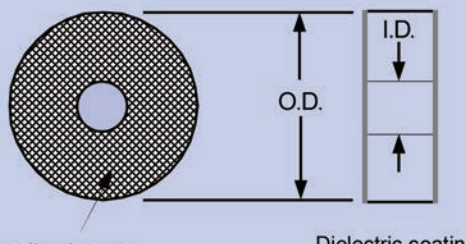
Notes: 1. Custom thickness available, affects ratings
2. Single impulse to cause 125°C. temp rise
3. Standardized for a 50Ω resistor in std. air, 1.2 / 50 µsec. pulse width

Ordering Information

W DDD T A XXX X

- W — Series
- DDD — Diameter (mm)
- T — Thickness code, 8= 25.4mm
- A — I.D. Code, A= 26, B= 34, C= 19, D= 10 (mm)
- XXX — Resistance, 2 digits + mult. Example, **331** = 330 ohms
- X — Tolerance: J = +/- 5%, K = +/- 10%, L = +/- 20%

Configuration



Applications

High Energy Disk resistors are most often used for low repetition rate discharge, crowbar, pulse shaping or other impulse duty. In practice, a resistor or combination is selected to yield no more than 100oC rise for the expected applied energy. Because of the large mass, a relatively long cooling time is required between pulses, or additional heat capacity must be allowed for. Our applications spreadsheet (MS Excel, available on diskette) can be used to easily model heat-up and cool-down profiles for your specific application.

Power Dissipation

Continuous power dissipation for High Energy Disk resistors is a function of mounting method used. In free air, .25 watt per cm2 of exposed surface area is a conservative rule of thumb. Thus, a 50mm disk with both faces and the periphery exposed could easily dissipate 20 watts. Higher power dissipation is achieved by conduction cooling through the mounting surface, applying an air or water cooled heat sink to either or both faces. See product information describing Custom Assemblies for more information on this subject, or consult our applications group.

Impulse Voltage

Maximum impulse voltage is mainly a function of resistance value and pulse width, and to a lesser extent, surface temperature and dielectric medium. The chart below shows the range of maximum impulse voltage for the standardized 1.2/ 50 µsec. pulse width in air.,which indicates the range and relative impulse ratings for thevarious standard sizes. Our applications group can assist you in assessing the correct parameters for your application.