



Custom HTR High Energy resistor stacks employ heavy-duty components for mechanical mounting, electrical isolation and termination, yielding ratings to thousands of kilojoules of single-surge energy.

High Energy 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.

● Features

- I .100% Active Material
- II .High Surge Energy Rating
- III .High Voltage Withstand
- IV .Essentially Non-Inductive
- V .Wide Resistivity Range
- VI .Wide Range of Geometries
- VII .Air / Oil / SF6 Environments
- VIII Single Disc or Modular Assemblies
- IX .Custom Solutions Readily Available
- X .Free Design Service

● Applications

HTR High Energy 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 100°C 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.

● Ordering Information

Example:

HTR	25300	80R00	K
(1)	(2)	(3)	(4)
Series Name	Part No	Resistance Value	Resistance Tolerance

(1) Style: HTR SERIES

(2) Part No.: 10200、15200、18200、25300.....

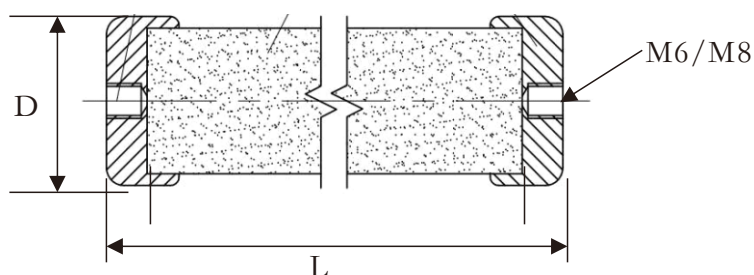
(3) Resistance Value: 0R5=0.5Ω、80R00=80R、100R00=100R、

(4) Tolerance: K=±10%、M=±20%

● Reference Standards

JIS C 5201-1

● Dimensions



Part	Dimensions(mm)					
Part No.	D $\pm$ 1	L min.	L max.	Max .Energy KJ@25°C	Resistance Range (Ω)	Sf6 (Transformer Oil) Pulse Peak Voltage (KV)
HTR10	10	20	200	0.5-4.5	2.50~76400	5-150
HTR15	15	20	200	1.0-10.5	1.20~33950	5-150
HTR18	18	20	200	1.5-15.0	0.80~23600	5-150
HTR20	20	20	200	1.8-18.5	0.65~19100	5-150
HTR22	22	20	200	2.3-22.0	0.55~15800	5-150
HTR25	25	20	300	2.9-44.0	0.45~18350	5-200
HTR28	28	20	300	3.7-55.0	0.35~14600	5-200
HTR30	30	20	500	4.2-106.0	0.30~21200	5-400
HTR32	32	20	500	4.8-120.0	0.25~18650	5-400
HTR35	35	20	500	5.8-144.0	0.20~16000	5-400
HTR38	38	20	500	6.8-170.0	0.20~13200	5-400
HTR40	40	20	500	7.5-188.0	0.15~11900	5-400
HTR42	42	20	200	8.3-83.0	0.15~4300	5-150
HTR45	45	20	200	9.5-95.0	0.15~3770	5-150
HTR48	48	20	200	10.9-108.0	0.10~3315	5-150
HTR50	50	20	200	11.8-117.0	0.10~3050	5-150

● Performance

Resistance Tolerance:	$\pm 10\%$, $\pm 20\%$
Metalization:	Aluminum electrode or Brass electrode (on flat surfaces)
Dielectric Coating	D
Density:	2.2 -2.6 gm/cc
Specific Heat:	0.22 -0.24 cal/ gm - °C
Maximum Operating Temperature	230°C
Thermal Conductivity	0.003 -0.006 cal/(cm - °C -sec)
Allowable Injection Energy	300 Joules /cc
Resistance Temperature Coefficient:	-0.0%to -0.1%/°C
Rated Peak Voltage:	> 1KV/10mm
Recommended Contact Pressure:	25 psi minimum, 50 -100 psi preferred
Power Rating:	Dependent on mounting and exposed surface area. In free air, parts will safely dissipate 2.5watts per square inch.
Coefficient of Thermal Expansion	4-6 X 10 ⁻⁶ /°C
Allowable Peak Voltage:	5.8 KV/in