HI - TECH RESISTORS PVT. LTD. AN ISO TS 16949:2009 CERTIFIED COMPANY





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Detailed datasheets in PDF format for all HTR product series available in the 'PRODUCT' section of www.htr-india.com

HIA

Power rating : 0.5W to 20W Resistance range : R01 to 120K Tolerances available : 1% - 10% Applications : • Industrial, telecommunication and consumer electronics. Features: • UL approved flame retardant coating • Industrial Grade - MIL sizes • Non-inductive type available. • Impulse resistors as per IEC 61000-4-5

HTA

Power rating : 0.75W to 12W Resistance range : R01 to 100K Tolerances available : 1% - 10% Applications : • Industrial, telecommunication and consumer electronics. Features : • UL approved flame retardant coating • Non-inductive type available • Impulse resistors as per IEC 61000-4-5 • Industrial grade-JSS/IEC sizes.

VHIA

Power rating : 0.5W to 20W Resistance range : R01 to 120K Tolerances available : 1% - 10% Applications : • Industrial, telecommunication and consumer electronics. Features : • UL approved flame retardant coating. • Non-inductive type available. • Impulse resistors as per IEC 61000-4-5. • Copper clad steel wire terminations for reduced temperature on PCB.

WIRE WOUND RESISTORS **Silicone Coated Cement Coated** c SU[®] us c **FL**[®] us **FRS** HFW Power rating: 1W to 5W Power rating: 1W to 5W Resistance range: 10R to 100R* Resistance range: 10R to 100R* Tolerance available : 1% - 10% **Tolerance available :** 1% - 10% Applications : Consumer, Applications : Consumer, telecommunication and industrial telecommunication and industrial electronics. Features : • UL 1412 approved. electronics. Features : • UL 1412 approved. • Safety fusing at 110/120 V. Safety fusing at 220/240 V. • Tailor made fusing options available.

Note * Higher resistance values available. Please enquire - info@htr-india.com

HAA

Power rating : 1W to 5W Resistance range : R01 to 12K Tolerances available : 1% - 10% Applications :

- Miniature sizes for automotive sector. Features :
- UL approved flame retardant coating
- Industrial grade
- Non-inductive type available, Impulse resistors as per IEC 61000-4-5

HFA

Power Rating: 1W to 10W Resistance range: R10 to 51K Tolerances Available: 5% - 10% Applications: Low cost solution for consumer electronics.

- Features :
- Fiber glass core.
- UL approved flame retardant coating.

WIRE WOUND RESISTORS Silicone Coated

Silicone Coated Cement Coated







Client

HFP

Power rating : 2.5W to 8W Resistance range : R10 to 56K Tolerances available : 5% - 10% Applications : Commercial & industrial electonics.

- Features :
- Fiber Glass core.
- PCB pluggable style with different
- terminations and stand off heights available.
- UL approved flame retardant coating.

HIP

Power Rating : 3W to 10W Resistance range : R01 to 90K Tolerances Available : 1% -10% Applications : Commercial and

- industrial electronics.
- Features :
- Ceramic core.
- PCB pluggable style.
- UL approved flame retardant coating.



HIR

Power Rating: 10W to 500W Resistance range : R22 to 100K Tolerances Available : 5% - 10% Applications : • High power dissipation and impulse handling capability. • High voltage bleeder resistor in power supplies. • Load bank resistors. Features :

• UL approved flame retardant coating. Radial terminals for Amp 187 & Amp 250 connectors available. • Choice of anti-rust stainless steel terminations.



RSR

Power Rating : 40W to 500W Resistance range: R05 to 18R Tolerances Available : 5% - 10% Applications : • High power dissipation and impulse handling capability. • High voltage bleeder resistor in power supplies. • Load bank resistors. **Features :** • Edge wound resistive strip for reduced surface temperature. • High dissipation and very low ohmic values available. • UL approved flame retardant coating. • Radial terminals for Amp 187 & Amp 250 connectors available. • Choice of anti-rust stainless steel terminations.



WIRE WOUND RESISTORS



HSR

Power Rating: 8.25W and 20W Resistance range : 10K to 120K Tolerances Available : 1% -10% **Applications :**

- · Capacitor charging and discharging resistors.
- Features :
- Wire wound symmetry resistors.
- UL approved flame retardant coating.
- Stainless steel terminals for mounting on capacitors.



HSRC

Power rating: 11W to 25W Resistance range: 10K to 110K Tolerance available : 1% - 10% Applications : • Capacitor charging and discharging resistors. Features :

- Wire wound symmetry resistors. Ceramic encased resistors for greater
- heat dissipation. Stainless steel terminals for mounting on capacitors.
- Customised solutions available upto 40W.

HCA

Power rating : 1W to 20W Resistance range : R05 to 56K **Tolerance available :** 1% - 10% **Applications :**

Industrial and consumer electronics. Features:

- Fibre glass and ceramic core available.
- Ceramic encased for high degree of insulation and low surface temperature.
- Impulse types available.
- Non inductive type available.

HCV

With bracket Power rating: 7W to 20W **Resistance range :** R05 to 56K Tolerance available : 1% - 10% Applications : Industrial and consumer electronics. Features : • High stability vertical

- mounting bracket available.
- Fibre glass and ceramic core available. • Ceramic encased for high degree of
- insulation and low surface temperature.
- Impulse types available.
- Non inductive type available.

HCW

Power rating : 1W to 20W **Resistance range :** R05 to 56K Tolerance available : 1% - 10% Applications : Industrial and consumer electronics. Features : • Ceramic core. Ceramic encased for high degree of

- insulation and low surface temperature.
- Impulse types available.
- Non inductive type available.
- Copper clad steel wire terminations for reduced temperature onPCB.
- Low TCR options available.

WIRE WOUND RESISTORS **Ceramic Encased**





FRC

Power rating: 1W to 3W **Resistance range :** 10R to 750R Tolerance available : 3% - 10% Applications : Industrial and consumer electronics.

Features :

- Safety fusing at 110/120V and 220/240V.
- Tailor made fusing options available.
- Fibre glass and ceramic core available.
- Ceramic encased for high degree of
- insulation and low surface temperature.

HEA

Power rating: 1W to 17W **Resistance range :** R025 to 82K Tolerance available : 1% - 10% **Applications :**

Industrial and consumer electronics. Features :

- Fibre glass and ceramic core available. • Ceramic encased for high degree of
- insulation & low surface temperature.
- Impulse types available.
- Non inductive type available.



Power rating: 4W to 17W **Resistance range :** R04 to 82K Tolerance available : 1% - 10% Applications : • Space saving, vertical mounting resistors.

• Consumer and industrial applications. Features :

 Choice of fibre glass or ceramic core. • Choice of mounting pillars for additional stability. • Non inductive type available.

HSVA/HSVAU Power rating: 4W to 17W

Resistance range : R04 to 82K Tolerance available : 1% - 10% Applications : • Both axial and space saving, vertical mounting resistors. • Consumer and industrial applications. Features :

 Choice of fibre glass or ceramic core. • Dual purpose HSVAU series is an useful inventory reducer for broad line distributor.

HCP

Power rating: 3W to 20W Resistance range : R10 to 56K Tolerance available : 3% - 10% Applications : Commercial and industrial electronics. Features :

Const-u

• Fibre glass and ceramic core available.

- Ceramic encased for high power dissipation.
- PCB pluggable style with different terminations and stand off heights available.







WIRE WOUND RESISTORS **Ceramic Encased**



HCL

Power rating: 10W to 40W Resistance range: R10 to 68K Tolerance available : 3% - 10% Applications : Commercial and industrial electronics. Features : • Fibre glass & ceramic core available. • Ceramic encased for high power dissipation. • Radial terminations for Amp 187 & Amp 250 connectors available.

Available with mounting bracket

which also serves as heat sink.



HMV

Power rating: 2.5W to 15W Resistance range : R04 to 36K Tolerance available : 3% - 10% Applications : Industrial and consumer electronics.

Features : • Flat vertical mounting type

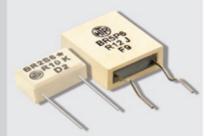
- Ceramic and fibre glass core available.
- Ceramic legs for greater stability
- also act as heat sink. Impulsive types available.
- Non inductive types available.
- PCB space saving resistor.



HMVL

Alloy Ribbon Element/ Flat Vertical Mounting Power rating: 2.5W to 15W Resistance range : R004 to R20 Tolerance available : 0.5% - 5% Applications : • Current sensing. Industrial and consumer electronics.

- Features : Flat vertical mounting type.
- Negligible inductance.
- Ceramic legs for greater stability
- also act as heat sink.
- PCB space saving resistor.



BR

Slim Type, Metal Plate/ Preformed resistance strip Power rating: 2W to 10W Resistance range : R01 to 1R8 Tolerance available: 1% - 10% Applications : • Reduces switching distortion at high frequency. • Audio amplifier.

- Features: PCB pluggable with option of various pitch and stand off heights.
- Negligible inductance.
- Twin style available.

RL

Power rating: 0.5W to 10W Resistance range: R0015 to R80 Tolerance available : 0.5% - 5% Applications : • Current sensing in applications which include switching and linear power supplies, instruments and power amplifiers. Features : • Alloy ribbon element in cylindrical ceramic body. • Superior alternative to replace moulded device of identical size.

- Negligible inductance.
- Highly thermal efficient power to size ratio.
- Low TCR.

LOW OHM/ **CURRENT SENSE** SHUNT RESISTORS **Ceramic Encased**







HCAL

Power rating: 1W to 20W Resistance range : R002 to R20 Tolerance available: 0.5% - 5% Applications : • Current sensing for industrial and power conditioning applications.

- Features : Alloy ribbon element Ceramic encased for greater heat
- dissipation and thermal stability. • Low TCR.
- Negligible inductance.

HEAL

Power rating: 2.5W to 12W Resistance range : R0025 to R20 Tolerance available : 0.5% - 5% Applications: Current sensing for industrial and power conditioning applications.

Features : • Alloy ribbon element in square profile ceramic tube.

- · Ceramic encased for greater heat dissipation and thermal stability.
- Low TCR. Negligible inductance.





OA

Power rating : 1W to 3W Resistance range : R003 to R10 Tolerance available : 0.5% to 5% Applications : Usage in switching, linear power supplies, instruments, regulators and other modern current sensing circuits. Features :

- Open frame axial type.
- Negligible inductance.
- Low TCR.

OP

Power rating : 0.5W to 5W Resistance range : R0015 to R10 Tolerance available : 0.5% to 5% Applications : Usage in switching, linear power supplies, instruments, regulators and other modern current sensing circuits. Features :

- Open frame PCB mounting radial type.
 Negligible inductance.
- Low TCR.

HEW

Power rating : 1W to 5W Resistance range : R003 to R10 Tolerance available : 0.5% to 5% Applications : Usage in switching, linear power supplies, instruments, regulators and other modern current sensing circuits. Features :

- Open frame PCB mounting radial type.
- Edge welding for reduced PCB footprint.
- Negligible inductance.
- Very low TCR available.





LOW OHM / CURRENT SENSE RESISTORS Open Frame



OF

Power rating : 1W to 10W Resistance range : R001 to R10 Tolerance available : 0.5% - 5% Applications : Usage in switching, linear power supplies, instruments, regulators and other modern current sensing circuits.

Features :

Open frame PCB mounting radial type.
 Monolithic construction for superior stability.
 Negligible inductance.
 Very low TCR available



OFSC

Power rating : 5W & 10W Resistance range : For 5W - R00012 to R002 For 10W - R0004 to R003 Tolerance available : 0.5% - 5% Applications : Highly accurate current sensing applications in automotive & industrial electronics. Features :

Four terminals for highly accurate current sensing applications.
UL approved flame retardant coating.
Increased lead diameter for high current handling capability.

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HIAS

Power rating : 1W to 5W Resistance range : R01 to 22K Tolerances available : 1% - 10% Applications : Fills the gap for melf and surface mount resistors in applications which are too severe for film resistors. Features : Wire wound with multiple SMD configurations. • UL approved flame retardant coating. • Non inductive types available. • Impulse resistors as per IEC 61000-4-5 • 1W and 2W – MELF type. • Tape & reel packing for pick & place machine.



HCAS/HCALS

Power rating : 2W to 3W Resistance range : R001 to 5K6 Tolerances available : 1% - 10% Features : • Wire Wound and Alloy Ribbon element options. • Ceramic encased for greater heat dissipation & thermal stability. • Package size 2W - 4527, 3W - 6927. • Tape and reel packing for pick and place machine. • Fusible type available. • Non inductive type available.

• Impulse resistors as per IEC 61000-4-5



HRW

Power rating: 0.6W to 3W Resistance range: R005 to 13K Tolerance available: 1% - 10% Features: • Wire wound and alloy ribbon element options.

- Moulded resistor construction.
- Package size : 0.6W 2010, 1W 2412, 2W 4527.
- Tape and reel packing for pick and place machine.
- Fusible type available.
- Non inductive type available.
- Impulse resistors as per IEC 61000-4-5

SURFACE MOUNT (SMD) RESISTORS







HSVAS/HSVALS

Power rating : 4W & 5W Resistance range : R003 to 16K Tolerances available : 1% - 10% Features : • Wire wound and alloy

- ribbon element options. • Ceramic encased for greater heat
- dissipation and thermal stability.
- Fusible type available.
- Tape and reel packing for pick & place machine. Non inductive type available.
- Impulse resistors as per IEC 61000-4-5



RLS

Power rating: 1.5W to 5W Resistance range: R0015 to R39 Tolerances available: 0.5% - 5% Applications: Current sensing in applications which include switching and linear power supplies, instruments and power amplifiers.

Features : • Alloy ribbon element in cylindrical ceramic body. • Superior alternative to replace moulded device of identical size. • Negligible inductance. • Highly thermal efficient power to size ratio. • Any resistance value possible within resistance range given. • Low TCR.



Noise suppressor resistor. Please refer HANS series in www.htr-india.com



For electronic braking and steering applications.



For power window applications.





AUTOMOTIVE RESISTIVE DEVICES



Customised resistive devices for engine cooling systems.





Ceramic type resistors for HVAC application.









Coil type resistor for HVAC application.



Customised resitive device for windpower applications.





CUSTOMISED RESISTIVE DEVICES



HTR can customise resistive devices for applications in various industries. Currently devices are being supplied to a large number of customers accross the industrial, automotive & consumer electronics sector.

Please enquire - info@htr-india.com

Techno-economic Solutions

HTR's credo and often repeated mantra has always been the supply of the right product at the right price for each specific application. To further this endeavour our R&D facility works in tandem with our "Application Engineering Department" to provide a value bundle of "Product, Information and Service" at the optimum price in order to meet our customers'JIT' requirements.

To reinforce this endeavour, being an ISO/TS 16949:2009 certified company we are one of the first to use the automotive "Product Part Approval Process" methodology for Industrial applications in which quality is "built in at source" from the very inception.

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Certification : <u>SO/TS 16949:2009</u>

TECHNICAL ASSISTANCE

For detailed information on :

- Datasheet in PDF format of all HTR product series.
- Quality Assurance
- Customer Assurance
- Application/Design notes for selection of Wirewound / Current Sense resistors
- Pulse/Surge capability of Power Resistors
- Explanation of commonly used technical terms
- Caution Notes

Please refer our website www.htr-india.com

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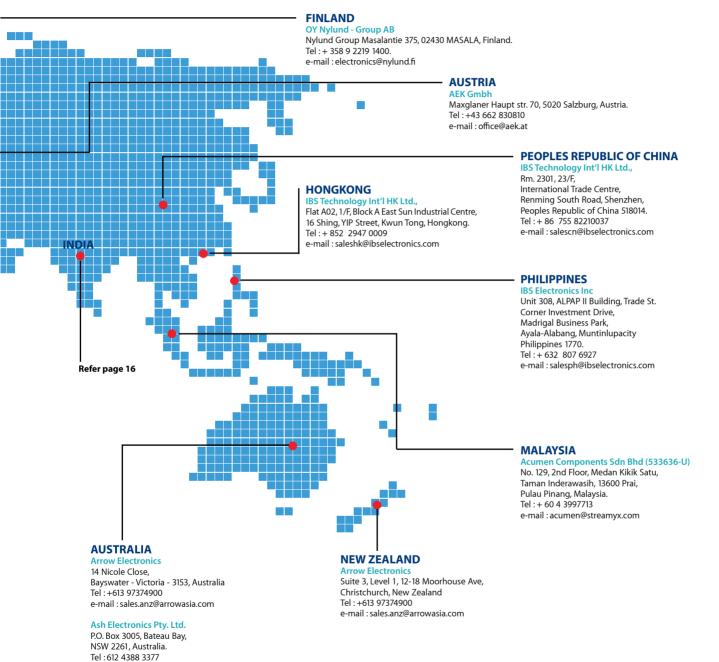
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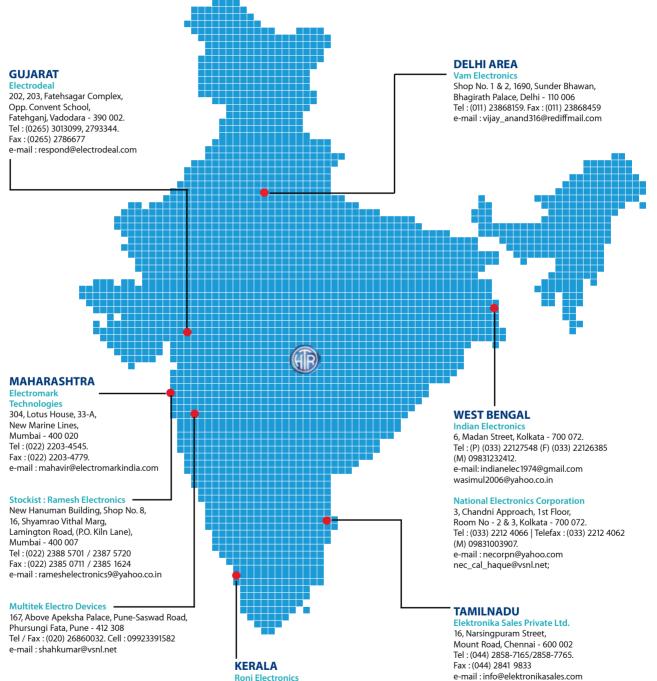
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