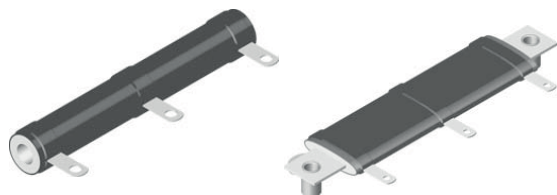




## Wirewound Resistors, Industrial Power, Tapped Tubular



### FEATURES

- Fixed taps for voltage dividers
- High temperature silicon coating
- Complete welded construction
- Excellent stability in operation (< 3 % change in resistance)
- Can be used as multi-tap resistor
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS\*

Available

HALOGEN

FREE

Available

GREEN

(5-2008)

Available

### Note

\* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

### STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25\text{ }^{\circ}\text{C}}$ W	RESISTANCE RANGE TOTAL RESISTANCE WITH ONE TAP $\Omega$	TOLERANCE $\pm \%$	WEIGHT (typical) g
HLT015	HLT-15	15	0.1 to 18K	10	8.64
HLT020	HLT-20	20	0.1 to 31K	10	12.57
HLT025	HLT-25	25	0.1 to 34K	10	20.72
HLT026	HLT-26	26	0.1 to 59K	10	15.34
HLT050	HLT-50	50	0.1 to 104K	10	42.08
HLT051	HLT-51	51	0.1 to 112K	10	51.96
HLT055	HLT-55	55	0.1 to 49K	10	60.48
HLT060	HLT-60	60	0.1 to 136K	10	65.64
HLT065	HLT-65	65	0.1 to 159K	10	64.82
HLT070	HLT-70	70	0.1 to 72K	10	60.48
HLT080	HLT-80	80	0.1 to 164K	10	121.58
HLT095	HLT-95	95	0.1 to 96K	10	76.51
HLT100	HLT-100	100	0.1 to 253K	10	91.37
HLT120	HLT-120	120	0.1 to 305K	10	183.82
HLT130	HLT-130	130	0.1 to 358K	10	192.36
HLT160	HLT-160	160	0.1 to 446K	10	245.86
HLT175	HLT-175	175	0.1 to 481K	10	250.80
HLT225	HLT-225	225	0.1 to 622K	10	309.97

### TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	HLT RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/ $^{\circ}\text{C}$	$\pm 30$ for 10 $\Omega$ and above; $\pm 50$ for 1.0 $\Omega$ to 9.9 $\Omega$ ; $\pm 90$ for 0.1 $\Omega$ to 0.99 $\Omega$
Dielectric Withstanding Voltage	$V_{AC}$	1000, from terminal to mounting hardware
Short Time Overload	-	10 x rated power for 5 s
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Insulation Resistance	$\Omega$	1000 M $\Omega$ minimum dry, 100 M $\Omega$ minimum after moisture test
Operating Temperature Range	$^{\circ}\text{C}$	-55 to +350

### GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: HLT12007Z150R0KJ

Global Part Numbering Example: HLT120-14160R00KJ

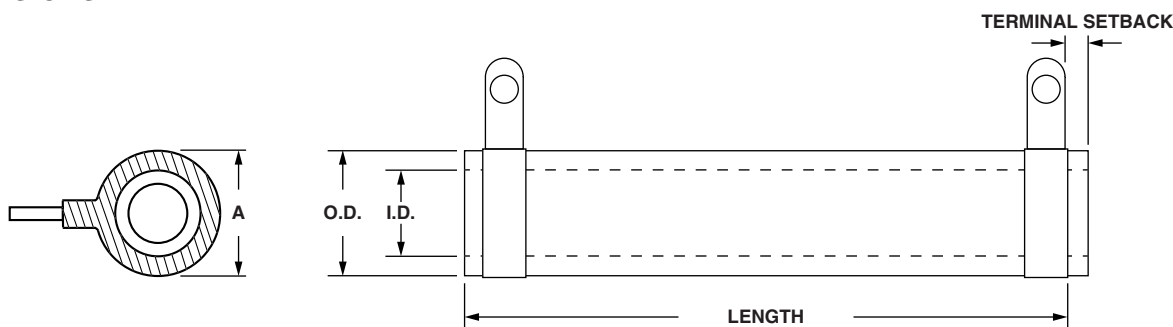
H	L	T	1	2	0	0	7	Z	1	5	0	R	0	K	J		
GLOBAL MODEL	TERMINAL DESIGNATION	TERMINAL FINISH	RESISTANCE VALUE	TOLERANCE	PACKAGING CODE	SPECIAL											
HLT120 (see "Standard Electrical Specifications" table above for additional P/N's)	02 06 07 09 14 15 16	E = lead (Pb)-free Z = tin / lead N = nickel	R = decimal K = thousand 10R00 = 10.0 Ω 1K000 = 1 kΩ	K = ± 10.0 %	E = lead (Pb)-free skin pack J <sup>(1)</sup> = skin pack (J01)	(dash number) (up to 2 digits) from 1 to 99 as applicable											
Note (1) Tin / lead for type "Z", lead (Pb)-free for type "N"																	

Historical Part Numbering example: HLT-120-07Z 150  $\Omega$  10 % J01

HLT-120	07Z	150 $\Omega$	10 %	J01
HISTORICAL MODEL	TERMINAL/FINISH	RESISTANCE VALUE	TOLERANCE	PACKAGING



## DIMENSIONS



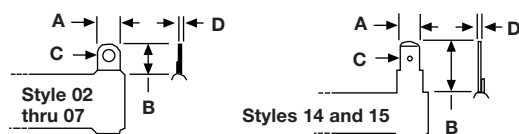
MODEL	DIMENSIONS in inches [millimeters]								
	A (max.)	CORE DIMENSIONS			TERMINAL SETBACK ± 0.031 [± 0.79]	DISTANCE BETWEEN TERMINALS (ref.)	TERMINAL DESIGNATION		BRACKET TYPE <sup>(2)</sup>
		LENGTH ± 0.062 [± 1.59]	O.D.	I.D. ± 0.031 [± 0.79]			STANDARD	OPTIONAL	
HLT015	0.563 [14.29]	1.500 [38.10]	0.438 [11.11]	0.313 [7.94]	0.094 [2.38]	0.937 [23.80]	02Z	14N	101, 203, 301
HLT020	0.563 [14.29]	2.000 [50.80]	0.438 [11.11]	0.313 [7.94]	0.094 [2.38]	1.437 [36.50]	02Z	14N	101, 203, 301
HLT025	0.688 [17.46]	2.000 [50.80]	0.563 [14.29]	0.313 [7.94]	0.094 [2.38]	1.312 [33.32]	06Z	15N	101, 203, 301
HLT026	0.563 [14.29]	3.000 [76.20]	0.438 [11.11]	0.313 [7.94]	0.094 [2.38]	2.437 [61.90]	02Z	14N	101, 203, 301
HLT050	0.688 [17.46]	4.000 [101.60]	0.563 [14.29]	0.313 [7.94]	0.094 [2.38]	3.312 [84.12]	06Z	15N	101, 203, 301
HLT051	0.906 [23.02]	3.500 [88.90]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	2.75 [69.85]	06Z	15N	102, 206, 303
HLT055	(1)	3.500 [88.90]	(1)	(1)	(1)	2.968 [75.39]	09Z	16N	(1)
HLT060	0.906 [23.02]	4.000 [101.60]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	3.250 [82.55]	06Z	15N	102, 206, 303
HLT065	0.906 [23.02]	4.500 [114.30]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	3.750 [95.25]	06Z	15N	102, 206, 303
HLT070	(1)	4.750 [120.65]	(1)	(1)	(1)	4.218 [107.14]	09Z	16N	(1)
HLT080	1.313 [33.34]	4.000 [101.60]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	2.812 [71.42]	07Z	15N	103, 205, 303
HLT095	(1)	6.000 [152.40]	(1)	(1)	(1)	5.468 [138.89]	09Z	16N	(1)
HLT100	0.906 [23.02]	6.500 [165.10]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	5.750 [146.05]	06Z	15N	102, 206, 303
HLT120	1.313 [33.34]	6.000 [152.40]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	4.812 [122.23]	07Z	15N	103, 205, 303
HLT130	1.313 [33.34]	6.500 [165.10]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	5.312 [134.93]	07Z	15N	103, 205, 303
HLT160	1.313 [33.34]	8.000 [203.20]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	6.812 [173.03]	07Z	15N	103, 205, 303
HLT175	1.313 [33.34]	8.500 [215.90]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	7.312 [185.73]	07Z	15N	103, 205, 303
HLT225	1.313 [33.34]	10.500 [266.70]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	9.312 [236.53]	07Z	15N	103, 205, 303

## Notes

(1) HLT055, HLT070, and HLT095 are HL Flat style, see HL Flat datasheet for detail dimensions.

(2) Brackets are available for mounting HLT series resistors - see Mounting Hardware section below.

## TERMINAL DIMENSIONS



## MOUNTING HARDWARE

Mounting hardware is available for HLT resistors, see "HL Brackets and Sliders" datasheet for more information ([www.vishay.com/doc?30279](http://www.vishay.com/doc?30279)).

## MATERIAL SPECIFICATIONS

**Element:** copper-nickel alloy or nickel-chrome alloy, depending on resistance value

**Core:** ceramic, steatite

**Coating:** special high temperature silicone

**Standard Terminals:** model "E" terminals are tinned steel

**Terminal Bands:** steel

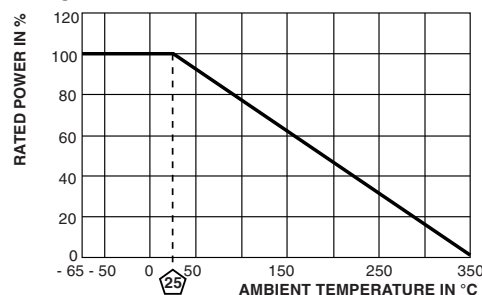
**Part Marking:** Dale, model, wattage, value, tolerance, date code

DIMENSION	TERMINAL STYLE						
	02	06	07	09	14	15	16
A	0.188 [4.76]	0.250 [6.35]	0.375 [9.53]	0.188 [4.76]	0.188 [4.76]	0.250 [6.35]	0.188 [4.76]
B	0.406 [10.32]	0.563 [14.29]	0.625 [15.88]	0.500 [12.70]	0.563 [14.29]	0.594 [15.08]	0.563 [14.29]
C	0.093 [2.36]	0.166 [4.22]	0.173 [4.39]	0.104 [2.64]	0.050 [1.27]	0.065 [1.65]	0.050 [1.27]
D	0.020 [0.51]	0.020 [0.51]	0.020 [0.51]	0.020 [0.51]	0.020 [0.51]	0.031 [0.79]	0.020 [0.51]

## TERMINAL FINISH

"E" Finish - 100 % Sn coated steel. "Z" Finish - 60/40 Sn/Pb coated steel. "N" Finish - Nickel coated steel. Finish for terminal style 14 and 15 is limited to nickel plated steel (N).

## DERATING





## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.