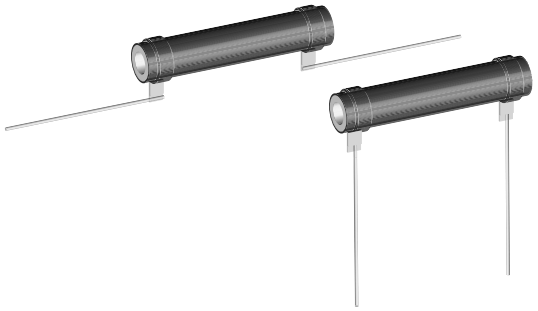
Wirewound Resistor, Industrial Power, Silicone Coated, Tubular



FEATURES

- High temperature silicone coating
- Complete welded construction
- Excellent for intermittent power and pulsing application
- Available in non-inductive style (special “NI”) with Ayrton-Perry winding
- Various lead and terminal options
- Excellent stability in operation (< 3 % change resistance)
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25\,°C}$ W	RESISTANCE RANGE Ω ± 5 %	RESISTANCE RANGE Ω ± 10 %	WEIGHT (typical) g
FSTL05	FSTL-5	5	1.0 to 20.5K	0.1 to 20.5K	4.60
FSTS05	FSTS-5	5	1.0 to 20.5K	0.1 to 20.5K	4.60
FSWL05	FSWL-5	5	1.0 to 20.5K	0.1 to 20.5K	4.60
FSTL10	FSTL-10	12	1.0 to 58K	0.10 to 58K	6.69
FSTS10	FSTS-10	12	1.0 to 58K	0.10 to 58K	6.69
FSWL10	FSWL-10	12	1.0 to 58K	0.10 to 58K	6.69
FSTL20	FSTL-20	20	1.0 to 95K	0.10 to 95K	12.57
FSTS20	FSTS-20	20	1.0 to 95K	0.10 to 95K	12.57
FSWL20	FSWL-20	20	1.0 to 95K	0.10 to 95K	12.57

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	FST RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 260 for 20 Ω and above, ± 400 for 1 Ω to 20 Ω, special TC’s available please contact factory
Short Time Overload	-	10 x rated power for 5 s
Dielectric Withstanding Voltage	V_{AC}	1000, from terminal to mounting hardware
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	°C	- 55 to + 350

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: FSTL05A1E25R00JE (visit www.vishay.net SAP parts manual for all options)

F	S	T	L	0	5	A	1	E	2	5	R	0	0	J	E		

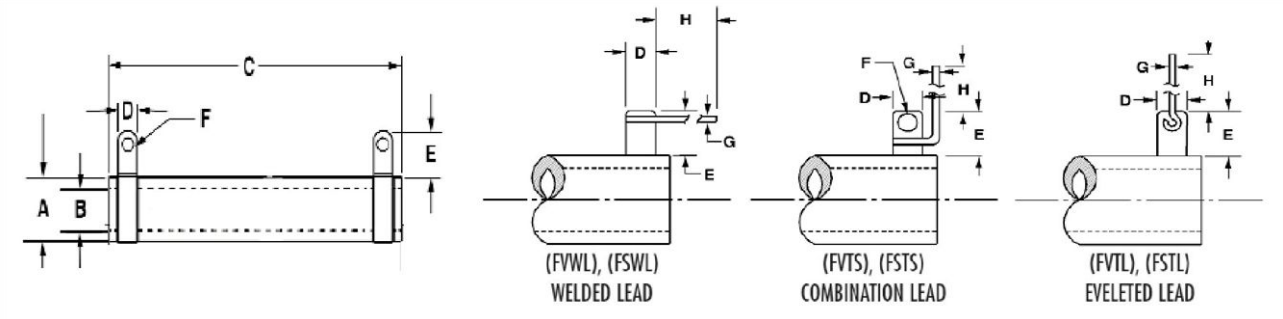
GLOBAL MODEL (6 digits)	TERMINAL DESIGNATION (2 digits)	TERMINAL FINISH (1 digit)	VALUE (5 digits)	TOLERANCE (1 digit)	PACKAGING CODE (1 digit)	SPECIAL (up to 2 digits)
(See Standard Electrical Specifications Global Model column for options)	**A1** **A2** **R1** **R2**	**E** = Lead (Pb)-free	**R** = Decimal **K** = Thousand **1R500** = 1.5 Ω **1K500** = 1.5 kΩ	**J** = ± 5 % **K** = ± 10 %	**E** = Lead (Pb)-free skin pack	(Dash number) From **1** to **99** as applicable **NI** = Non-inductive

Historical Part Number example: FSTL-5-25-5 %

FSTL-5	25 Ω	5 %	
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE	SPECIAL

For technical questions, contact: ww2aresistors@vishay.com

DIMENSIONS in inches [millimeters]



MODEL	DIMENSIONS in inches [millimeters]									
	CORE DIMENSIONS			TERMINAL				LEADS		BRACKET TYPE
	A	B	C	D	E	F	DESIGNATION	G	H	
FSTL05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.188 [4.78]	0.438 [11.11]	-	R2	0.032 [0.813]	2.00 [50.80]	209
FSTS05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.188 [4.78]	0.438 [11.11]	0.104 [2.64]	R2	0.032 [0.813]	2.00 [50.80]	209
FSWL05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.125 [3.175]	0.250 [6.35]	-	A2	0.032 [0.813]	2.00 [50.80]	209
FSTL10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.188 [4.78]	0.438 [11.11]	-	R1	0.040 [1.02]	2.00 [50.80]	209
FSTS10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.188 [4.78]	0.438 [11.11]	0.104 [2.64]	R1	0.040 [1.02]	2.00 [50.80]	209
FSWL10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.125 [3.175]	0.250 [6.35]	-	A1	0.040 [1.02]	2.00 [50.80]	209
FSTL20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.188 [4.78]	0.406 [10.32]	-	R1	0.040 [1.02]	2.00 [50.80]	203
FSTS20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.188 [4.78]	0.406 [10.32]	0.063 [1.59]	R1	0.040 [1.02]	2.00 [50.80]	203
FSWL20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.125 [3.175]	0.250 [6.35]	-	A1	0.040 [1.02]	2.00 [50.80]	203

MATERIAL SPECIFICATIONS

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

Core: Ceramic, steatite

Coating: Special high temperature silicone

Standard Terminals: Tinned alloy 42

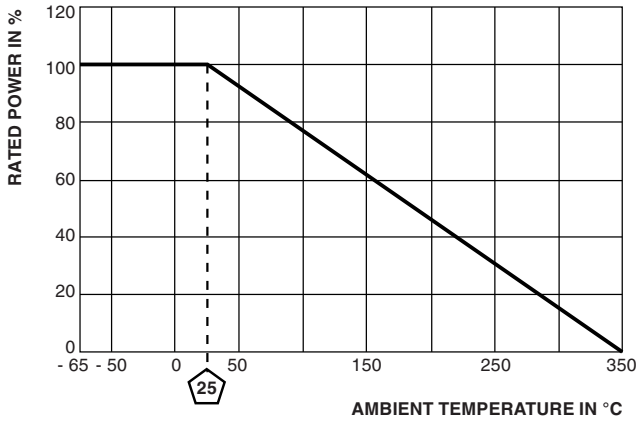
Terminal Bands: Alloy 42

Part Marking: HEI, model, wattage, value, tolerance, date code

NON-INDUCTIVE

Models of equivalent physical and electrical specifications are available with non-inductive (Ayrton-Perry) winding. They are identified by adding the letters “NI” to the end of the part number in the special section. For non-inductive models the maximum resistance values are lower.

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.

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.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:
FSTL20R1E20R00JENI