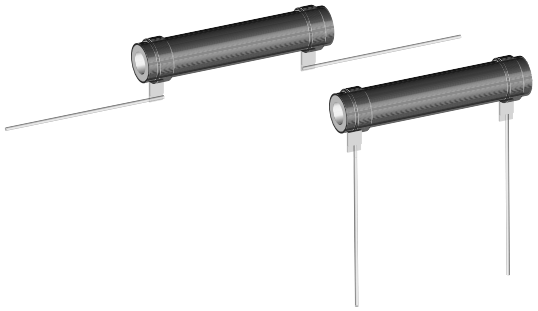
Wirewound Resistor, Industrial Power, Silicone Coated, Tubular



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
FSWL5A	HLW-05	5.25	1.0 to 15K	0.10 to 15K	2.12
FSTL5A	HLW-05	5.25	1.0 to 15K	0.10 to 15K	2.12
FSWL05	FSWL-5	8	1.0 to 20.5K	0.1 to 20.5K	4.60
FSWL08	HLW-06	8	1.0 to 20.5K	0.10 to 20.5K	4.60
FSTL08	HLW-06	8	1.0 to 20.5K	0.10 to 20.5K	4.60
FSWL1A	HLW-10	10	1.0 to 29K	0.10 to 29K	6.24
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
FSWL12	HLW-12	12	1.0 to 58K	0.10 to 58K	6.69
FSTL12	HLW-12	12	1.0 to 58K	0.10 to 58K	6.69
FSWL15	HLW-15	15	1.0 to 60K	0.10 to 60K	8.82
FSTL15	HLW-15	15	1.0 to 60K	0.10 to 60K	8.82
FSWL2A	HLW-20	20	1.0 to 95K	0.10 to 95K	11.36
FSTL2A	HLW-20	20	1.0 to 95K	0.10 to 95K	11.36
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

For technical questions, contact: ww2dresistors@vishay.com

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GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: FSTL05R2E25R00JE (visit www.vishay.net SAP parts manual for all options)

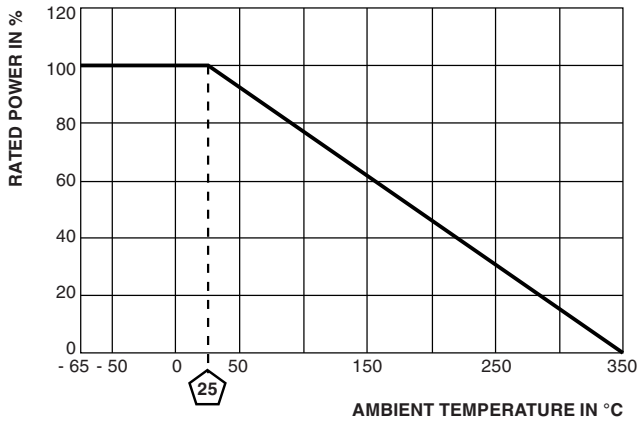
F	S	T	L	0	5	R	2	E	2	5	R	0	0	J	E		

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 bulk pack FSTL/FSWL products to be lead (PB)-free foam packed.	(dash number) from **1** to **99** as applicable **CT** = center tap **NI** = non-inductive **92** = 203 or 209 style push-in bracket as applicable

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

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

DERATING



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

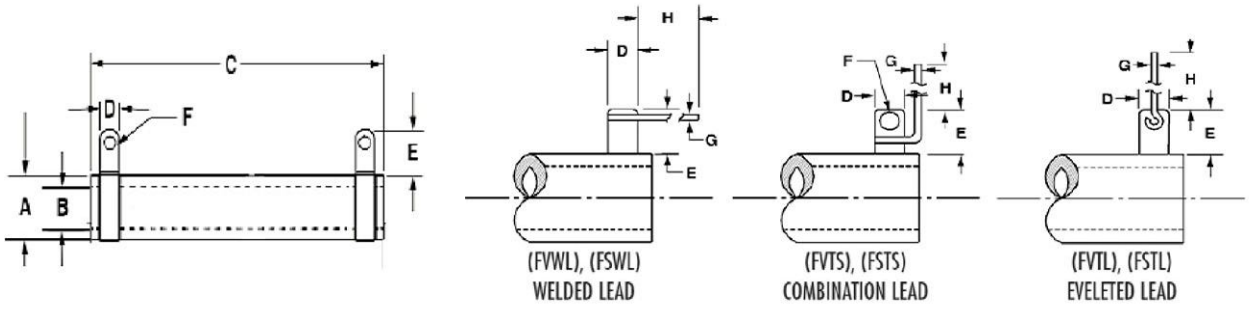
Models of equivalent physical and electrical specifications are available with non-inductive (Ayrton-Perry) winding. They are identified by adding the letters “NI” to the end of the part number in the special section. For non-inductive models the maximum resistance values are lower.

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DIMENSIONS in inches [millimeters]



MODEL	CORE DIMENSIONS (REF.)			TERMINAL				LEADS		BRACKET TYPE
	A	B	C	D ± 0.005 [± 0.12]	E ± 0.015 [± 0.38]	F ± 0.005 [± 0.12]	DESIGNATION	G ± 0.002 [± 0.05]	H ± 0.125 [± 3.18]	
FSTL05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R2	0.032 [0.813]	2.90 [73.66]	209
FSTS05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R2	0.032 [0.813]	1.50 [38.10]	209
FSWL5A	0.250 [6.35]	0.125 [3.18]	0.625 [15.88]	0.063 [1.59]	0.188 [4.76] typ.	n/a	A2	0.032 [0.813]	1.50 [38.10]	
FSTL5A	0.250 [6.35]	0.125 [3.18]	0.625 [15.88]	0.063 [1.59]	0.188 [4.76] typ.	n/a	R2	0.032 [0.813]	1.50 [38.10]	
FSWL05	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.125 [3.175]	0.188 [4.78]	n/a	A2	0.032 [0.813]	1.50 [38.10]	209
FSWL08	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.125 [3.18]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	
FSTL08	0.313 [7.94]	0.188 [4.76]	1.000 [25.40]	0.125 [3.18]	0.188 [4.76] typ.	n/a	R1	0.040 [1.02]	1.50 [38.10]	
FSWL1A	0.438 [11.11]	0.313 [7.94]	1.000 [25.40]	0.125 [3.18]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	
FSTL10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R1	0.040 [1.02]	2.90 [73.66]	209
FSTS10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.188 [4.78]	0.406 [10.31]	0.132 [3.35]	R1	0.040 [1.02]	1.50 [38.10]	209
FSWL10	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.125 [3.175]	0.188 [4.78]	n/a	A1	0.040 [1.02]	1.50 [38.10]	209
FSWL12	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.125 [3.18]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	
FSTL12	0.313 [7.94]	0.188 [4.76]	1.750 [44.45]	0.125 [3.18]	0.188 [4.76] typ.	n/a	R1	0.040 [1.02]	1.50 [38.10]	
FSWL15	0.438 [11.11]	0.313 [7.94]	1.500 [38.10]	0.125 [3.18]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	
FSTL15	0.438 [11.11]	0.313 [7.94]	1.500 [38.10]	0.125 [3.18]	0.188 [4.76] typ.	n/a	R1	0.040 [1.02]	1.50 [38.10]	
FSWL2A	0.438 [11.11]	0.313 [7.94]	2.000 [50.80]	0.125 [3.18]	0.188 [4.76] typ.	n/a	A1	0.040 [1.02]	1.50 [38.10]	
FSTL2A	0.438 [11.11]	0.313 [7.94]	2.000 [50.80]	0.125 [3.18]	0.188 [4.76] typ.	n/a	R1	0.040 [1.02]	1.50 [38.10]	
FSTL20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.188 [4.78]	0.406 [10.32]	0.133 [3.37]	R1	0.040 [1.02]	1.65 [41.91]	203
FSTS20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.188 [4.78]	0.406 [10.32]	0.133 [3.37]	R1	0.040 [1.02]	1.50 [38.10]	203
FSWL20	0.438 [11.11]	0.260 [6.604]	2.000 [50.8]	0.125 [3.175]	0.188 [4.78]	n/a	A1	0.040 [1.02]	1.50 [38.10]	203

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