

Wirewound Resistor, Industrial Power, Silicone Coated, Standard Oval


FEATURES

- High temperature silicone coating
- Mounting accommodations ideally suited to high density packaging
- Available in non-inductive style (special "NI") with Ayrton-Perry winding
- Self-stacking hardware for horizontal or vertical placement
- Mounting hardware functions as a heat sink allowing greater heat dissipation and less derating of stacked units
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


**RoHS
COMPLIANT**

STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25^{\circ}\text{C}}$ W	RESISTANCE RANGE Ω $\pm 5\%$	RESISTANCE RANGE Ω $\pm 10\%$	WEIGHT (typical) g
FSOT10 FSOT10-NI	FSOT-10 FSOT-10-NI	10	1.0 to 15K 1.0 to 1.8K	0.10 to 15K 1.0 to 1.8K	0.41
FSOT15 FSOT15-NI	FSOT-15 FSOT-15-NI	15	1.0 to 26K 1.0 to 3.6K	0.10 to 26K 1.0 to 3.6K	0.47
FSOT20 FSOT20-NI	FSOT-20 FSOT-20-NI	20	1.0 to 71K 1.0 to 9.8K	0.10 to 71K 1.0 to 9.8K	0.74
FSOT30 FSOT30-NI	FSOT-30 FSOT-30-NI	30	1.0 to 11K 1.0 to 1.2K	0.10 to 11K 1.0 to 1.2K	20.14
FSOT40 FSOT40-NI	FSOT-40 FSOT-40-NI	40	1.0 to 26K 1.0 to 3K	0.10 to 26K 1.0 to 3K	30.07
FSOT55 FSOT55-NI	FSOT-55 FSOT-55-NI	55	1.0 to 54K 1.0 to 6.8K	0.10 to 54K 1.0 to 6.8K	51.25
FSOT65 / FSOT70 ⁽¹⁾ FSOT65-NI / FSOT70-NI ⁽¹⁾	FSOT-65 FSOT-65-NI	70	1.0 to 77K 1.0 to 9.4K	0.10 to 77K 1.0 to 9.4K	60.48
FSOT75 / FSOT95 ⁽¹⁾ FSOT75-NI / FSOT95-NI ⁽¹⁾	FSOT-75 FSOT-75-NI	95	1.0 to 99.9K 1.0 to 12.4K	0.10 to 99.9K 1.0 to 12.4K	76.51

Note

⁽¹⁾ The preferred Models are the FSOT70 and FSOT95. FSOT65 and FSOT75 are being shown as they have historically been used for these two wattages.

TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	FSOT RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 260 for 20 Ω and above, ± 400 for 1 Ω to 20 Ω , special TC's available
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

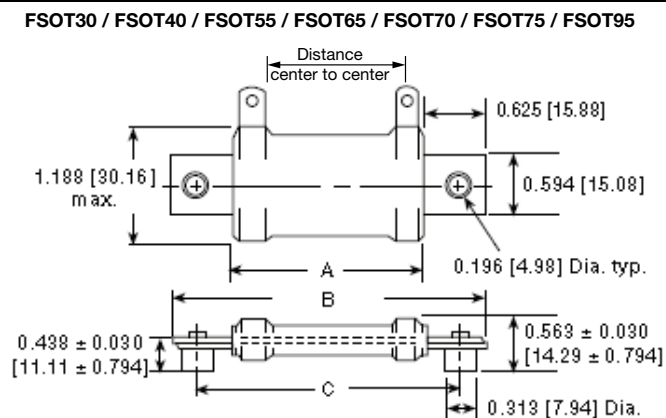
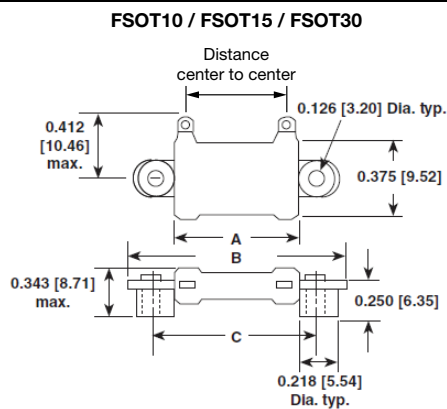
 Global Part Numbering example: **FSOT5509E25R00JE** (visit www.vishay.net SAP parts manual for all options)

F	S	O	T	5	5	0	9	E	2	5	R	0	0	J	E		
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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)	09 11 16	E = lead (Pb)-free	R = decimal K = thousand 1R500 = 1.5 Ω 1K500 = 1.5 kΩ	J = ± 5 % K = ± 10 %	E = lead (Pb)-free cell and bulk pack	(dash number) from 1 to 99 as applicable CT = center tap NI = non-inductive

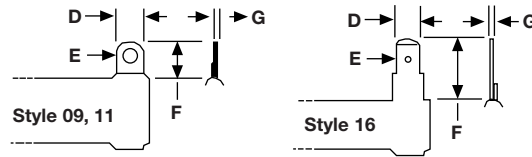
 Historical Part Number example: **FSOT-55-25-5 %**

FSOT-20	25 Ω	5 %	
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE	SPECIAL

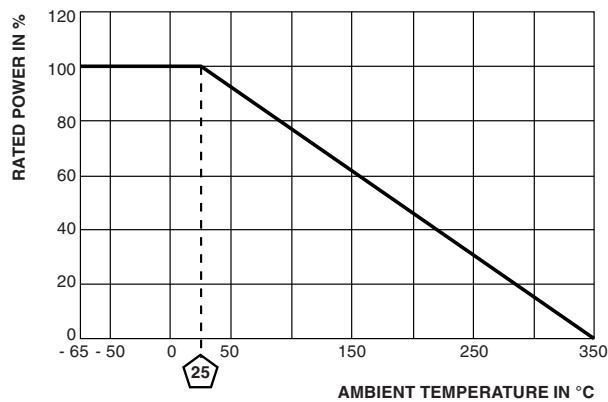
DIMENSIONS in inches [millimeters]


MODEL	A ± 0.063 [1.59]	B ± 0.063 [1.59]	C ± 0.031 [0.79]	DISTANCE CENTER TO CENTER (REF.)	TERMINAL DESIGNATION	
					STANDARD	OPTIONAL (QUICK CONNECT)
FSOT10	0.750 [19.05]	1.312 [33.32]	1.000 [25.40]	0.531 [13.49]	11	-
FSOT15	1.000 [25.40]	1.562 [39.67]	1.250 [31.75]	0.781 [19.84]	11	-
FSOT20	2.062 [52.37]	2.625 [66.68]	2.312 [58.72]	1.843 [46.81]	11	-
FSOT30	1.250 [31.75]	2.500 [63.50]	2.000 [50.8]	0.906 [23.01]	09	16
FSOT40	2.000 [50.8]	3.250 [82.55]	2.750 [69.85]	1.656 [42.06]	09	16
FSOT55	3.500 [88.90]	4.750 [120.65]	4.250 [107.95]	3.156 [80.16]	09	16
FSOT65 / FSOT70 ⁽¹⁾	4.750 [120.65]	6.000 [152.4]	5.500 [139.7]	4.406 [111.91]	09	16
FSOT75 / FSOT95 ⁽¹⁾	6.000 [152.4]	7.250 [184.15]	6.750 [171.45]	5.656 [143.66]	09	16

Note
⁽¹⁾ The preferred Models are the FSOT70 and FSOT95. FSOT65 and FSOT75 are being shown as they have historically been used for these two wattages.

TERMINAL DIMENSIONS


DIMENSIONS	STYLE 09	STYLE 11	STYLE 16
D	0.188 [4.76]	0.125 [3.18]	0.188 [4.76]
E (HOLE DIAMETER)	0.106 [2.69]	0.081 [2.10]	0.050 [1.27]
F	0.438 [11.13]	0.235 [5.97]	0.563 [14.30]
G	0.020 [0.51]	0.020 [0.51]	0.020 [0.51]

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

Optional Terminals (Quick Connect): 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, see Standard Electrical Specifications Table.



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