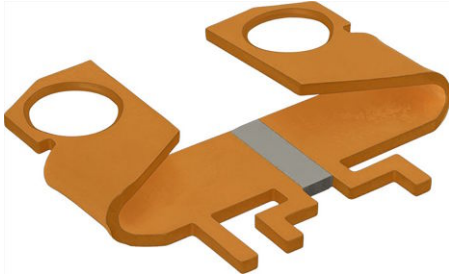


## Power Metal Strip® Meter Shunt Resistor Very Low Value (down to 0.0001 Ω)


**FEATURES**

- High power to resistor size ratio
- 5-terminal connection design
- Use for single or multi-phase energy meters
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- Very low inductance (< 5 nH)
- Low thermal EMF (< 3 μV/°C)
- Material categorization: For definitions please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
**GREEN**  
(5-2008)

STANDARD ELECTRICAL SPECIFICATIONS						
GLOBAL MODEL	SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	TOLERANCE %	RESISTANCE VALUE RANGE Ω	RESISTANCE VALUES CURRENTLY AVAILABLE <sup>(1)</sup> Ω	WEIGHT (typical) G
WSMS3124	3124	3.0	5.0	100μ to 750μ	100μ, 200μ, 400μ	4.3

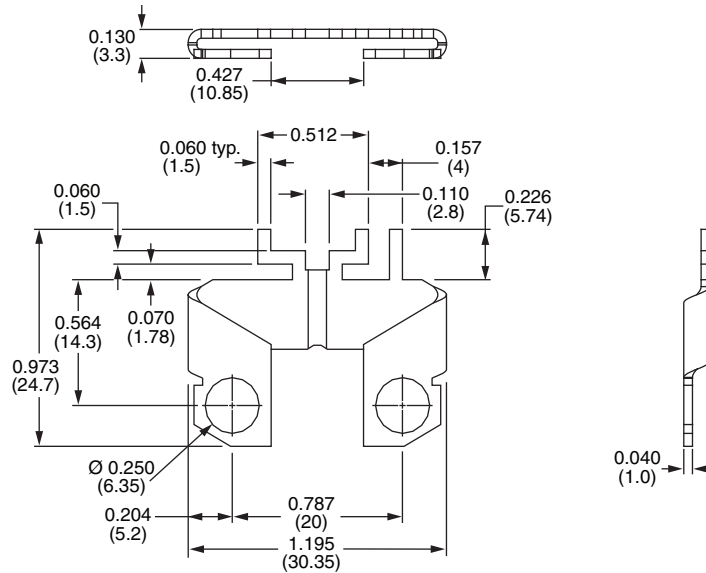
**Note**

<sup>(1)</sup> Other values may be available, contact factory

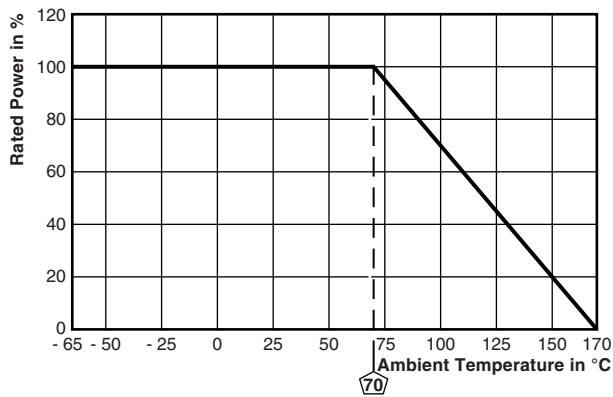
TECHNICAL SPECIFICATIONS		
PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 75
Operating Temperature Range	°C	- 65 to + 170
Maximum Current Rating	A	$(P/R)^{1/2}$

GLOBAL PART NUMBER INFORMATION																
GLOBAL PART NUMBERING EXAMPLE: WSMS3124L1000JK (WSMS3124, 0.0001 Ω, ± 5 %)																
W	S	M	S	3	1	2	4	L	1	0	0	0	J	K		
GLOBAL MODEL <b>WSMS3124</b>		RESISTANCE VALUE L = mΩ L1000 = 0.00010 Ω L2000 = 0.00020 Ω L4000 = 0.00040 Ω				TOLERANCE CODE J = ± 5.0 %		PACKAGING CODE K = Bulk pack E = Tape and reel				SPECIAL (Dash number) (Up to 2 digits) From 1 to 99 as applicable				

**DIMENSIONS** in inches (millimeters)



**DERATING**



TOLERANCES ON DECIMALS  
XXX ± 0.005

RESISTANCE VALUE (μΩ)	RESISTOR ELEMENT THICKNESS (inches)	ELEMENT LENGTH	ELEMENT MATERIAL
100	0.038	0.090	Mn-Cu
200	0.040	0.180	Mn-Cu
400	0.035	0.090	Ni-Cu

PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Thermal Shock	- 55 °C to + 150 °C, 1000 cycles, 15 min at each extreme	± 0.5 % ΔR
Short Time Overload	5 x rated power for 5 s	± 0.5 % ΔR
Low Temperature Operation	- 65 °C for 45 min	± 0.5 % ΔR
High Temperature Exposure	1000 h at + 170 °C	± 1.0 % ΔR
Bias Humidity	+ 85 °C, 85 % RH, 10 % bias, 1000 h	± 0.5 % ΔR
Mechanical Shock	100 g's for 6 ms, 5 pulses	± 0.5 % ΔR
Vibration	Frequency varied 10 Hz to 2000 Hz in 1 min, 3 directions, 12 h	± 0.5 % ΔR
Load Life	1000 h at + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± 1.0 % ΔR
Moisture Resistance	MIL-STD-202, method 106, 0 % power, 7b not required	± 0.5 % ΔR



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