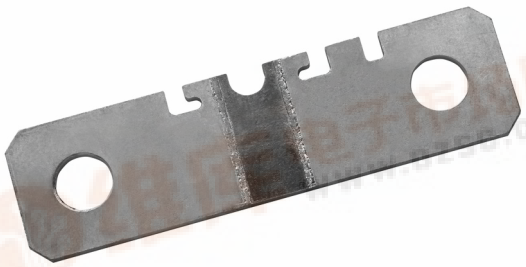
WSMS5515

Vishay Dale

Power Metal Strip® Meter Shunt Resistor, Very Low Value (down to 0.00016 Ω)



FEATURES

- High power to resistor size ratio
- 4-Terminal (Kelvin) connection design
- Proprietary processing technique produces extremely low resistance values
- All welded construction
- RoHS compliant, lead (Pb)-free construction
- Very low inductance (< 0.5 nH)
- Excellent frequency response to 50 MHz
- Low thermal EMF (< 3 µV/°C)

Pb-free RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING $P_{70\,°C}$ W	TOLERANCE %	RESISTANCE VALUE AVAILABLE µΩ	WEIGHT (Typical) g
WSMS5515	3.0	5.0	160, 200, 250, 300, 500	7.8

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	160 µΩ, 200 µΩ and 250 µΩ = ± 225 300 µΩ and 500 µΩ = ± 175
Operating Temperature Range	°C	- 65 to + 170
Maximum Current Rating	A	$(P/R)^{1/2}$

GLOBAL PART NUMBER INFORMATION

GLOBAL PART NUMBERING: WSMS5515L2500JK (WSMS5515, 0.00025 Ω, ± 5 %)

W	S	M	S	5	5	1	5	L	2	5	0	0	J	K		

GLOBAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING CODE	SPECIAL
WSMS5515	**L** = mΩ **L1600** = 0.00016 Ω **L2000** = 0.00020 Ω **L2500** = 0.00025 Ω **L3000** = 0.00030 Ω **L5000** = 0.00050 Ω	**J** = ± 5.0 %	**K** = Bulk pack	(Dash number) (up to 2 digits) From **1 - 99** as applicable

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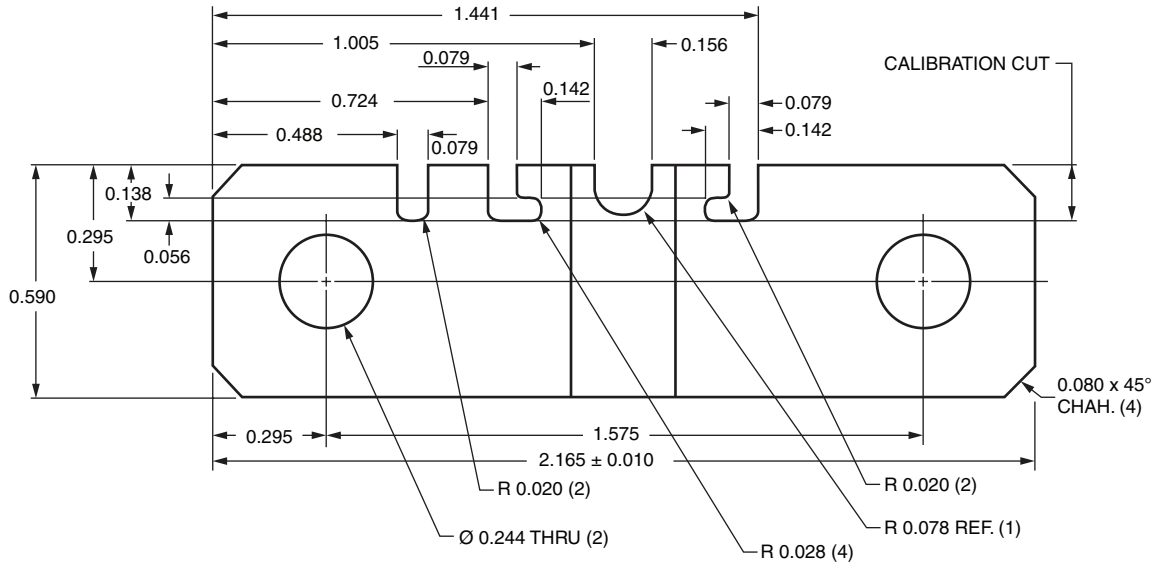
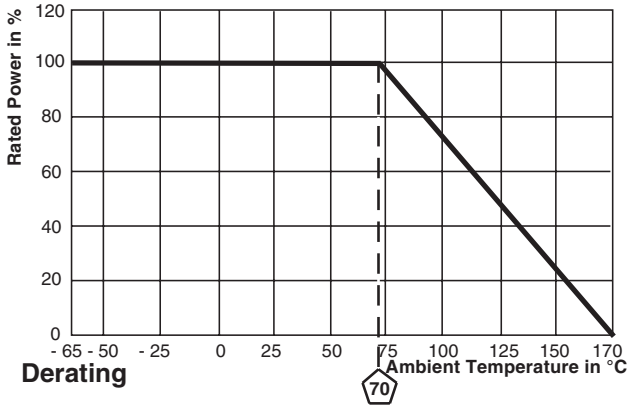
DIMENSIONS in inches





TOLERANCES ON DECIMALS
XXX ± 0.005

RESISTANCE VALUE (μΩ)	RESISTOR THICKNESS (inches)	ELEMENT MATERIAL
160	0.051	Mn-Cu
200	0.051	Mn-Cu
250	0.033	Mn-Cu
300	0.033	Mn-Cu
500	0.059	Fe-Cr

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

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