

Multi-Turn 3/8" (9.52 mm) Square Wirewound Trimmers



ELECTRICAL SPECIFICATIONS				
Electrical travel	22 turns ± 4 turns			
Resistance range	10 Ω to 10 k Ω (extended range available in non MIL-SPEC product)			
Resistance tolerance	± 5 % standard (closer tolerances available)			
Temperature coefficient (-65 °C to +150 °C)	± 50 ppm/°C			
Power rating	1.0 W at +85 °C derated to 0 W at +150 °C, these specifications exceed MIL-SPEC			
End resistance	1 Ω or 2 %, whichever is greater			
Equivalent noise resistance (ENR)	100 Ω maximum			
Dielectric (DWV)	1000 V _{AC} at atmospheric pressure These specifications exceed MIL-SPEC			
Insulation resistance	$> 100~000~M\Omega~(500~V_{DC})$ these specifications exceed MIL-SPEC			

ENVIRONMENTAL SPECIFICATIONS

Temperature limits: -65 °C to +150 °C Sealing: fully sealed case (non-hermetic)

MECHANICAL SPECIFICATIONS

Operating torque: 5 oz.-inches maximum

Rotation: clutch stop, wiper idles

Weight: 0.935 g maximum

Resistive element: nickel chromium Rotational life: 200 cycles minimum Terminal strength: 2 lbs for 10 s

FEATURES

- Precious metal wiper
- 1.0 W to +85 °C
- TCR ± 50 ppm/°C
- Solderable leads
- Military quality at affordable prices

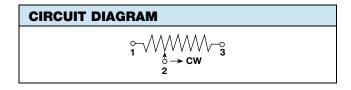
APPLICATIONS

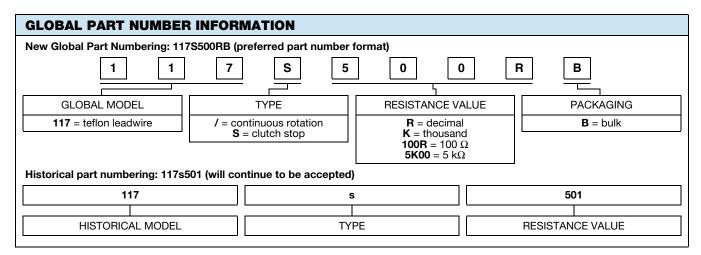
Wirewound trimmers are particularly useful in those applications where any combination of high power, low temperature coefficient of resistance and / or excellent long term life stability are important design considerations.

STANDARD RESISTANCE VALUES			
RESISTANCE (1) (Ω)	NOMINAL RESOLUTION (%)		
10	1.10		
20	0.85		
50	0.65		
100	0.51		
200	0.40		
500	0.45		
1K	0.34		
2K	0.27		
5K	0.20		
10K	0.16		
20K	0.13		

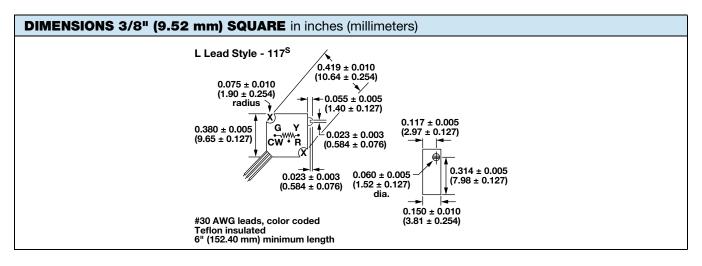
Note

(1) Other resistances available upon request





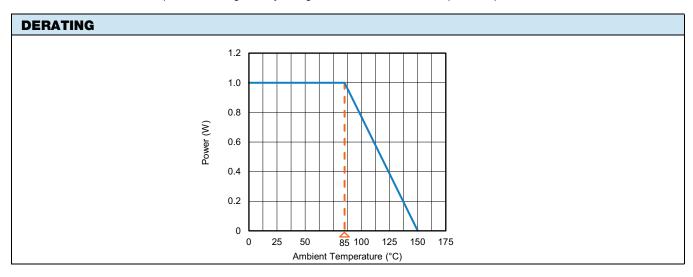




ENVIRONMENTAL PERFORMANCE					
TEST (1)		CONDITIONS	MIL-PRF-39015 REQUIREMENT	TYPICAL CHANGE	
Power conditioning	(108)	50 h at 1 W at +25 °C	$\Delta R \le 0.5 \% ^{(2)}$	$\Delta R < 0.08 \%$	
Thermal shock	(107)	5 cycles, -55 °C to +125 °C	$\Delta R \le 1.0 \% (2)$	$\Delta R < 0.07 \%$	
Low temperature storage		72 h, no load at -65 °C	$\Delta R \le 1.0 \% (2)$	$\Delta R < 0.05 \%$	
Low temperature operation		1 h storage, 45 min rated power at -55 °C	$\Delta R \le 1.0 \% (2)(3)$	$\Delta R < 0.08 \%$	
High temperature exposure		1000 h, no load at +150 °C	$\Delta R \le 1.0 \% (2)(3)$	$\Delta R < 0.03 \%$	
Moisture resistance	(106)	480 h at rated power with humidity ranging from 80 % RH to 98 % RH	$\Delta R \le 1.0 \% ^{(2)}$	ΔR < 0.22 %	
Resistance to soldering heat	(210)	+350 °C for 3 s	$\Delta R \le 1.0 \% ^{(2)}$	$\Delta R < 0.02 \%$	
Shock	(213)	18 shocks, 100 g , 6 ms, sawtooth, 3 axes	$\Delta R \le 1.0 \% (2)(3)$	$\Delta R < 0.27 \%$	
Vibration	(204)	10 Hz to 2000 Hz, 20 g, 12 h, 3 axes	$\Delta R \le 1.0 \% (2)(3)$	$\Delta R < 0.04 \%$	
Rotational life		200 cycles	ΔR ≤ 2.0 %	$\Delta R < 0.06 \%$	
Load life	(108)	10 000 h at rated power at +85 °C	ΔR ≤ 3.0 %	ΔR < 0.23 %	

Notes

- (1) Numbers in parenthesis refer to test method MIL-STD-202 as modified by the detail specification
- (2) For values below 100 W, add 0.05 W to the allowable change
- (3) The referenced tests also require that setting stability change shall not exceed ± 0.05 % plus the specified maximum resolution



ACCESSORIES	
Screwdrivers (to order separately)	www.vishay.com/doc?57015



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