# Stackpole Electronics, Inc.

High Current Shunt / Sensing Resistor

Resistive Product Solution:

# Features:

- Values from 0.003 to 0.1
- Suitable for high current applications where standard current sense resistor will not survive
- Current handling up to 100 amps
- Handles 1W to 5W of power
- Various wire alloys and sizes allow for value, tolerance, and TC flexibility; contact factory for specific combination of alloy and Temperature Coefficient of Resistance
- 100% RoHS compliant and lead free without exemption
- Halogen free
- REACH compliant



Electrical Specifications						
Type / Code	Power Rating	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance			
	(Watts) @ 25°C	Resistance remperature Coemicient	2%	5%, 10%		
HLD1	1 W					
HLD3	3 W	±100 ppm/°C - ±50 ppm/°C	0.03 - 0.1	0.003 - 0.1		
HLD5	5 W					

# Style A Style B Style B C C Style B C Style B

Type / Code	Style	Α	В	С	D	Е	F	Unit	
		Lead Spacing	Lead Diameter	Total Length	Height	Lead Width	Type to Bend		
HLD1	Α	1.100 ± 0.100	0.040	-	0.200 ± 0.150	0.200 ± 0.010	0.100	inches	
		27.94 ± 2.54	1.02	-	5.08 ± 3.81	5.08 ± 0.25	2.54	mm	
HLD3	В	1.000 ± 0.100	0.081	1.400 max	0.450 ± 0.100	0.250 ± 0.010	0.100	inches	
		25.40 ± 2.54	2.06	35.56 max	11.43 ± 2.54	6.35 ± 0.25	2.54	mm	
HLD5	В	1.000 ± 0.100	0.081	1.400 max	0.450 ± 0.100	0.250 ± 0.010	0.100	inches	
		25.40 ± 2.54	2.06	35.56 max	11.43 ± 2.54	6.35 ± 0.25	2.54	mm	

Performance Characteristics					
Test	Test Method	Test Specification	Typical		
	MIL-STD-502F-Method 108A		≤ 5%		
Load Life	RCWW at 70 °C; 1.5 hours ON, 0.5 hour OFF	± 5%			
	Total 1024 ± 24hrs				
Short Time Overload	JIS-C-5202-5.5 5x rated power for 5 sec	± 2%	≤ 2%		
Thermal EMF(1)	-	± 40 μ V / °C	-		

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Operating Temperature Range: -55 °C to +275 °C

(1) Thermal EMF dependant on Alloy selection. Contact Factory.

Resistive Product Solutions

# **RoHS Compliance**

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

RoHS Compliance Status							
Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)	
HLD	Open air Bare Element Current Shunt / Sensing Resistor	Special (4 Leads)	YES	100% Matte Sn	Always	Always	

### "Conflict Metals" Commitment

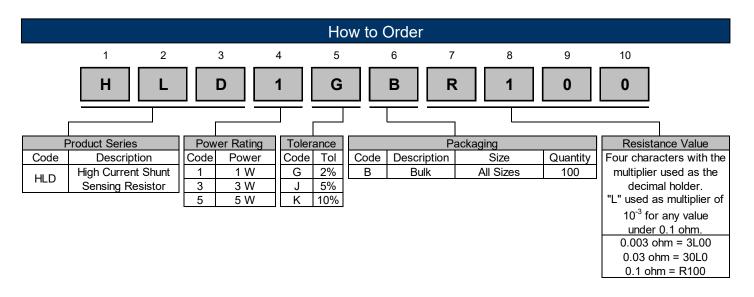
We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

# Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

# **Environmental Policy**

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.



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