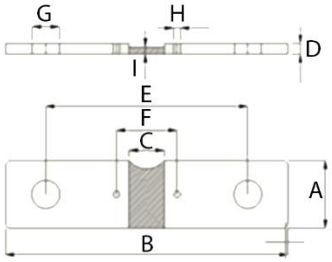
Features:

- 36 W up to 350 A at 0.1mΩ
- RoHS compliant, lead free and halogen free
- Excellent long-term stability
- Qualified to AEC-Q200

Electrical Specifications

Type / Code	Power Rating (W)	TCR (ppm/k)	Ohmic Range (Ω) and Tolerance
			5%
HCC8420	36	± 225	0.0001

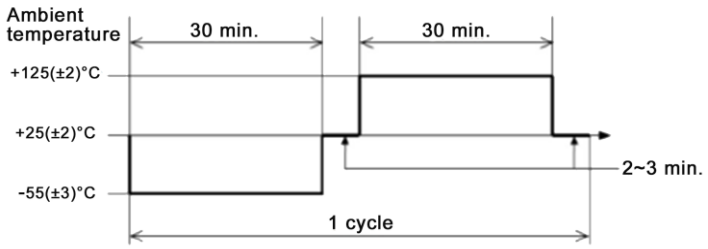
Mechanical Specifications



Type/Code	A	B	C	D	E	Unit
HCC8420	0.787 ± 0.008	3.307 ± 0.008	0.343 ± 0.008	0.118 ± 0.008	2.362 ± 0.008	inches
	20.00 ± 0.20	84.00 ± 0.20	8.70 ± 0.20	3.00 ± 0.20	60.00 ± 0.20	mm
	F	G	H	I	Unit	
	0.709 ± 0.008	0.327 ± 0.004	0.079 ± 0.004	0.079 ± 0.008	inches	
	18.00 ± 0.20	8.30 ± 0.10	2.00 ± 0.10	2.00 ± 0.20	mm	

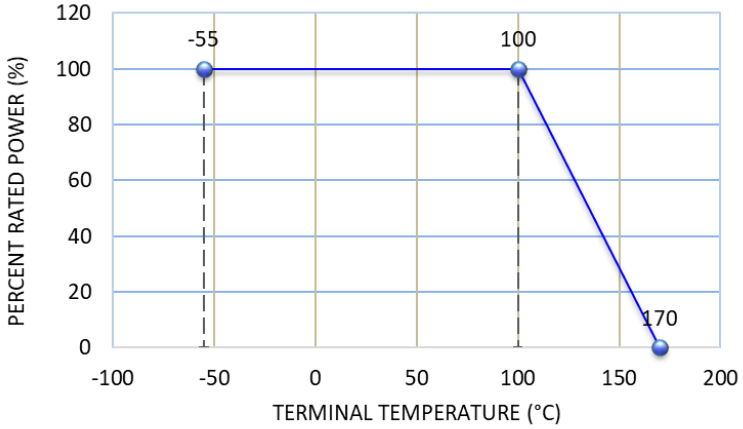
Performance Characteristics

Item	Test Condition	Specification
Short Time Overload	5 times rated power for 5 seconds (JIS-C5202-5.5)	±1%
Temperature Coefficient of Resistance (TCR)	+25ºC/+125ºC (JIS-C5202-5.2) $TCR\ (ppm/ºC) = \frac{\Delta R}{R \times \Delta t} \times 10^6$	Refer to Electrical Specifications
Moisture Resistance	The specimens shall be placed in a chamber and subjected to a relative humidity of 90~98% and a temperature of 25/65ºC, 10 cycles. (MIL-STD-202, Method 106)	±1%
High Temperature Exposure	The part (mounted on board) is exposed in the heat chamber, 125ºC for 1000 hour (JIS-C5202-7.2)	±1%
Load Life	Apply rated power at 70 ± 2ºC for 1000 hours with 1.5 hours ON and 0.5 hour OFF. (JIS-C5202-7.10)	±1%

Performance Characteristics (cont.)		
Item	Test Condition	Specification
Rapid Change of Temperature	The part (mounted on board) is exposed, -55 ± 3ºC (30 minutes)/ +125 ± 2ºC (30 minutes) for 5 cycles. The following conditions are as the figure below. (JIS_C5202-7.4) 	±1%

Note: The surface temperature of component should be below 100ºC.
Recommended storage conditions: 22~28ºC. Humidity: 40~75%
Operating temperature range is -55 to +170°C

Power Derating Curve:



Recommended Solder Profile

This information is intended as a reference for solder profiles for Stackpole resistive components. These profiles should be compatible with most soldering processes. These are only recommendations. Actual numbers will depend on board density, geometry, packages used, etc., especially those cells labeled with "*".

100% Matte Tin / RoHS Compliant Terminations

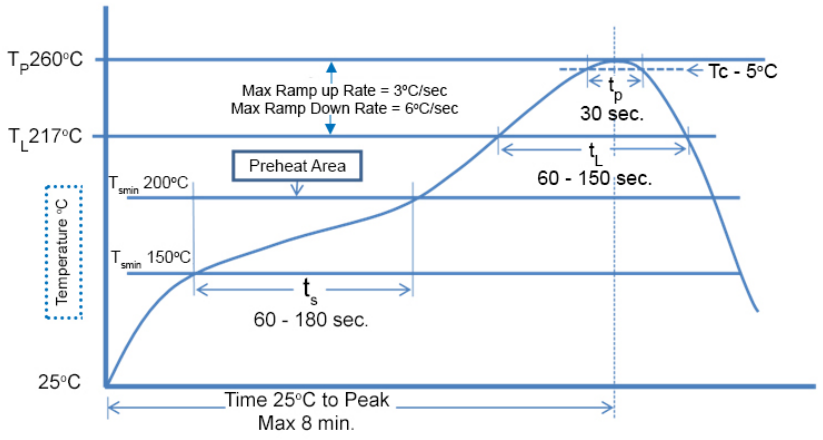
Soldering iron recommended temperatures: 330 to 350°C with minimum duration.
Maximum number of reflow cycles: 3.

Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 seconds	70 seconds	60 seconds
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	250°C	240°C
Dwell Time at Max.	10 seconds	5 seconds	*
Ramp DN (°C/sec)	N/A	N/A	N/A

Temperature Diff. = Difference between final preheat stage and soldering stage.

Convection IR Reflow			
Description	Maximum	Recommended	Minimum
Ramp Up (°C/sec)	3°C/sec	2°C/sec	*
Dwell Time > 217°C	150 seconds	90 seconds	60 seconds
Solder Temp.	260°C	245°C	*
Dwell Time at Max.	30 seconds	15 seconds	10 seconds
Ramp DN (°C/sec)	6°C/sec	3°C/sec	*

Recommended Lead Free Resistor Reflow Profile



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)
HCC	High Current Chassis Mount Shunt Resistor	SMD	YES	100% Copper	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.

How to Order

H	C	C	8	4	2	0	J	B	L	1	0	0

Product Series

Code	Description
HCC	High Current Chassis Mount Shunt

Size

Code	W
8420	36

Tolerance

Code	Tol
J	5%

Packaging

Code	Description	Size	Quantity
B	Bulk	8420	100

Resistance Value

Four characters with "L" used as multiplier of 10^{-3} for any value under 0.1 ohm

0.0001 = L100