

Features:

- High temperature molded encapsulation
- Flex termination for absorbing thermal expansion
- All welded construction
- Non-inductive winding available (contact Stackpole with requirements)
- RoHS compliant, REACH compliant, lead free, and halogen free



Electrical Specifications

Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage	Dielectric Withstanding Voltage (V)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance			
					0.1%	0.5%	1%	5%
SM4124	2	√(P•R)	> 500	± 75	-		0.051 - 0.098	0.01 - 0.091
				± 100	5 - 10	3 - 10	0.1 - 10	
				± 20	10.1 - 1K		10.2 - 1K	11 - 1K
SM4527	2	√(P•R)	> 500	± 75	-		0.051- 0.091	0.01 - 0.091
				± 100	5 - 10	3 - 10	0.1 - 10	
				± 20	10.1 - 1K		10.2 - 1K	11 - 1K
SM4527...-LP	2	√(P•R)	> 500	± 75	-		0.01 - 0.05	
SMH4527	3	√(P•R)	> 500	± 75	-		0.01 - 0.05	
SM6227	3	√(P•R)	> 500	± 75	-		0.051 - 0.091	
				± 100	0.1 - 10			
				± 20	10.1 - 3K		10.2 - 3K	11 - 3K
SM8035	4	√(P•R)	> 500	± 75	-		0.051 - 0.091	
				± 100	0.1 - 10			
				± 20	10.1 - 5K		10.2 - 5K	11 - 5K

Mechanical Specifications



Type/Code	A Body Length	B Total Length	C Body Height	D Body Width	E Termination Width	F Termination Length	W	H	L	Unit
SM4124	0.410 ± 0.015 10.41 ± 0.38	0.430 ± 0.032 10.92 ± 0.81	0.180 ± 0.015 4.57 ± 0.38	0.240 ± 0.015 6.10 ± 0.38	0.122 ± 0.015 3.10 ± 0.38	0.090 ± 0.015 2.29 ± 0.38	0.181 4.60	0.157 3.99	0.583 14.81	inches mm
SM4527	0.455 ± 0.015 11.56 ± 0.38	0.475 ± 0.032 12.07 ± 0.81	0.215 ± 0.015 5.46 ± 0.38	0.270 ± 0.015 6.86 ± 0.38	0.122 ± 0.015 3.10 ± 0.38	0.105 ± 0.015 2.67 ± 0.38	0.169 4.29	0.157 3.99	0.587 14.91	inches mm
SM4527...-LP	0.455 ± 0.015 11.56 ± 0.38	0.475 ± 0.032 12.07 ± 0.81	0.150 ± 0.015 3.81 ± 0.38	0.270 ± 0.015 6.86 ± 0.38	0.122 ± 0.015 3.10 ± 0.38	0.105 ± 0.015 2.67 ± 0.38	0.169 4.29	0.157 3.99	0.587 14.91	inches mm
SMH4527	0.455 ± 0.015 11.56 ± 0.38	0.475 ± 0.032 12.07 ± 0.81	0.150 ± 0.015 3.81 ± 0.38	0.270 ± 0.015 6.86 ± 0.38	0.122 ± 0.015 3.10 ± 0.38	0.105 ± 0.015 2.67 ± 0.38	0.169 4.29	0.157 3.99	0.587 14.91	inches mm

Mechanical Specifications (cont.)

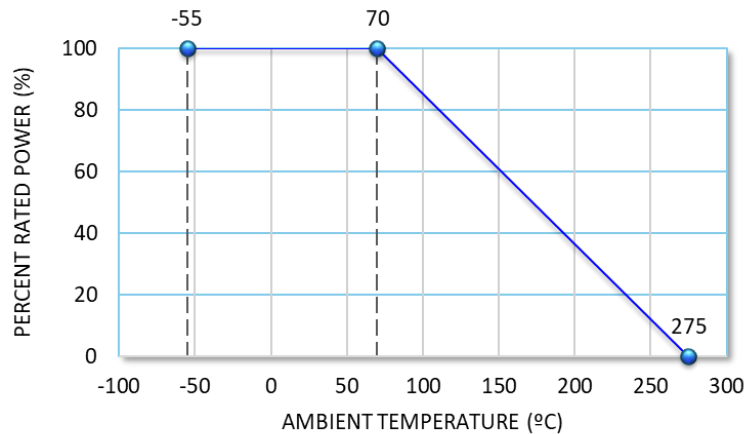
Type/Code	A Body Length	B Total Length	C Body Height	D Body Width	E Termination Width	F Termination Length	W	H	L	Unit
SM6227	0.625 ± 0.015 15.88 ± 0.38	0.645 ± 0.032 16.38 ± 0.81	0.250 ± 0.015 6.35 ± 0.38	0.275 ± 0.015 6.99 ± 0.38	0.122 ± 0.015 3.10 ± 0.38	0.130 ± 0.015 3.30 ± 0.38	0.236 5.99	0.157 3.99	0.850 21.59	inches mm
SM8035	0.800 ± 0.015 20.32 ± 0.38	0.830 ± 0.032 21.08 ± 0.81	0.370 ± 0.015 9.40 ± 0.38	0.350 ± 0.015 8.89 ± 0.38	0.115 ± 0.015 2.92 ± 0.38	0.165 ± 0.015 4.19 ± 0.38	0.340 8.64	0.157 3.99	0.950 24.13	inches mm

Performance Characteristics

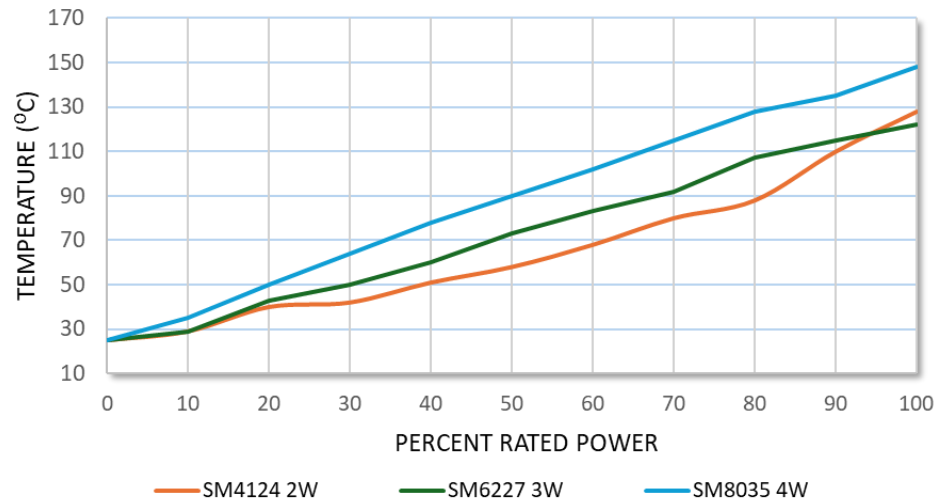
Test	Test Specification
Moisture Resistance	± 1%
Thermal Shock	± 0.5%
Load Life @ 70°C - 1000 hours	± 1%
Resistance to Soldering Heat	± 1%
Terminal Strength	± 0.5%
Dielectric Withstanding Voltage	± 0.001% / V
Short Time Overload	± 0.2%

Operating temperature range is -55 to +275°C

Power Derating Curve:



Hot Spot Temperature:



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 “*”.

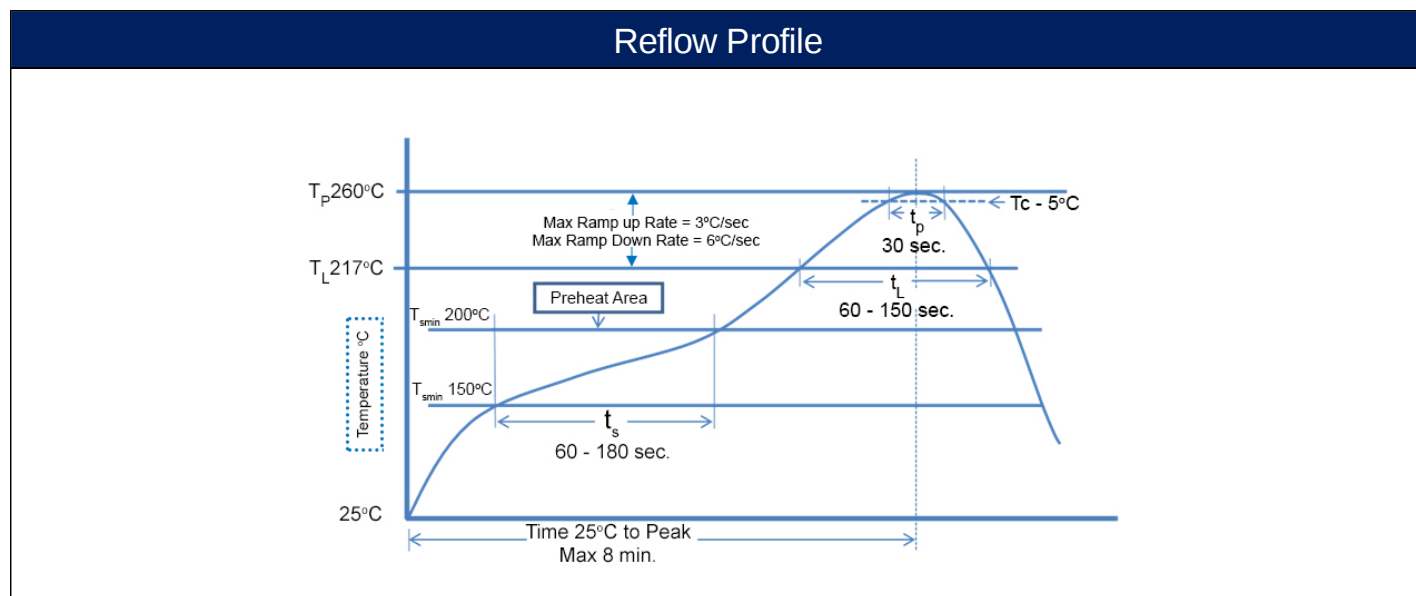
100% Matte Tin / RoHS Compliant Terminations

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

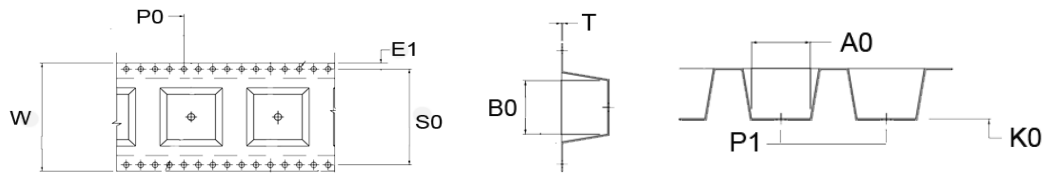
Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 seconds	70 seconds	60 seconds
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	250°C	240°C
Dwell Time at Max.	10 seconds	5 seconds	*
Ramp DN (°C/sec)	N/A	N/A	N/A

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	*



Packaging Specification



Product	W	P ₀	E ₁	T	S ₀	P ₁	A ₀	K ₀	B ₀	Unit
SM2615	0.630 ± 0.012 16.00 ± 0.30	0.157 4.00	0.069 1.75	0.018 0.45	-	0.315 8.00	0.161 4.10	0.159 4.03	0.302 7.66	inches mm
SM4124	0.945 ± 0.012 24.00 ± 0.30	0.157 4.00	0.069 1.75	0.018 0.45	-	0.472 12.00	0.257 6.53	0.206 5.22	0.457 11.60	inches mm
SM4527	0.945 ± 0.012 24.00 ± 0.30	0.157 4.00	0.069 1.75	0.018 0.45	-	0.472 12.00	0.286 7.26	0.246 6.24	0.491 12.47	inches mm
SM6227	1.260 ± 0.012 32.00 ± 0.30	0.157 4.00	0.069 1.75	0.018 0.45	1.118 28.40	0.472 12.00	0.276 7.01	0.271 6.88	0.665 16.89	inches mm
SM8035	1.732 ± 0.012 44.00 ± 0.30	0.157 4.00	0.069 1.75	0.018 0.45	1.591 40.40	0.630 16.00	0.343 8.71	0.396 10.05	0.856 21.73	inches mm

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

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)
SM	Surface Mount Wirewound Resistor (Standard)	SMD	YES	100% Matte Sn	Jan-06	06/01
SMH	Surface Mount Wirewound Resistor (High Power)					
NSM	Surface Mount Wirewound Resistor (Non-inductive)					

"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

S	M	4	1	2	4	F	T	1	K	0	0	-	L	P																																																																		
<table><tr><th colspan="2">Product Series</th></tr><tr><td>Code</td><td>Description</td></tr><tr><td>SM</td><td>Standard</td></tr><tr><td>SMH</td><td>High Power</td></tr><tr><td>NSM</td><td>Non-inductive</td></tr></table>		Product Series		Code	Description	SM	Standard	SMH	High Power	NSM	Non-inductive	<table><tr><th colspan="2">Power Rating</th></tr><tr><td>Size</td><td>W</td></tr><tr><td>4124</td><td>2</td></tr><tr><td>4527</td><td>2</td></tr><tr><td>(H)4527</td><td>3</td></tr><tr><td>6227</td><td>3</td></tr><tr><td>8035</td><td>4</td></tr></table>		Power Rating		Size	W	4124	2	4527	2	(H)4527	3	6227	3	8035	4	<table><tr><th colspan="2">Tolerance</th></tr><tr><td>Code</td><td>Tol</td></tr><tr><td>B</td><td>0.1%</td></tr><tr><td>D</td><td>0.5%</td></tr><tr><td>F</td><td>1%</td></tr><tr><td>J</td><td>5%</td></tr></table>		Tolerance		Code	Tol	B	0.1%	D	0.5%	F	1%	J	5%	<table><tr><th colspan="3">Packaging</th></tr><tr><td>Code</td><td>Description</td><td>Size</td><td>Quantity</td></tr><tr><td rowspan="5">T</td><td rowspan="5">13" Reel Plastic Tape</td><td>4527(-LP), H4527</td><td>1200</td></tr><tr><td>4527</td><td>900</td></tr><tr><td>4124</td><td>800</td></tr><tr><td>6227</td><td>750</td></tr><tr><td>8035</td><td>350</td></tr></table>					Packaging			Code	Description	Size	Quantity	T	13" Reel Plastic Tape	4527(-LP), H4527	1200	4527	900	4124	800	6227	750	8035	350	<table><tr><th colspan="1">Resistance Value</th></tr><tr><td>Four characters with the multiplier used as the decimal holder. "L" used as multiplier of 10⁻³ for any value under 0.1 ohm. 0.01 ohm = 10L0 0.1 ohm = R100 1 Kohm = 1K00</td></tr></table>			Resistance Value	Four characters with the multiplier used as the decimal holder. "L" used as multiplier of 10 ⁻³ for any value under 0.1 ohm. 0.01 ohm = 10L0 0.1 ohm = R100 1 Kohm = 1K00	<table><tr><th colspan="2">Special</th></tr><tr><td>Code</td><td>Description</td></tr><tr><td>blank</td><td>Standard</td></tr><tr><td>-LP</td><td>Low Profile</td></tr></table>		Special		Code	Description	blank	Standard	-LP	Low Profile
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