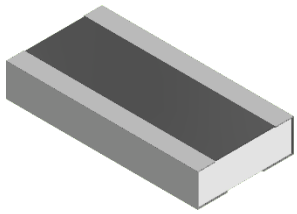
Features

- Efficient heat dissipation
- Anti-sulfur
- RoHS compliant, REACH compliant, lead free, and halogen free
- AEC-Q200 qualified

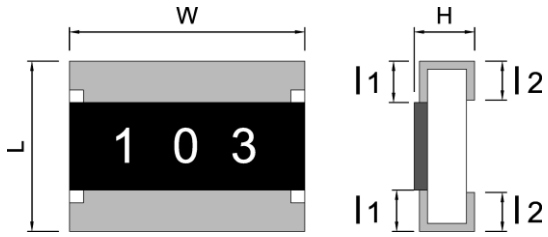


Electrical Specifications					
Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage (V)	Maximum Overload Voltage (V)	TCR (ppm/ºC)	Ohmic Range (Ω) and Tolerance
					1% and 5%
RMWA0508	0.75	200	400	± 200	1 - 9.76
				± 100	10 - 1M
RMWA0612	0.75	200	400	± 200	1 - 9.76
				± 100	10 - 10M
RMWA1020	1	200	400	± 200	1 - 9.76
				± 100	10 - 10M
RMWA1218	1	200	400	± 200	1 - 9.76
				± 100	10 - 10M
RMWA1225	2	200	400	± 200	1 - 9.76
				± 100	10 - 10M

Electrical Specifications - High Power					
Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage (V)	Maximum Overload Voltage (V)	TCR (ppm/ºC)	Ohmic Range (Ω) and Tolerance
					1% and 5%
RMWA0508-HP	1	200	400	±150	1 - 9.76
				± 100	10 - 1M
RMWA0612-HP	1.5	200	400	± 100	1 - 10M
RMWA1020-HP	2	200	400	± 100	1 - 10M
RMWA1218-HP	2	200	400	± 100	1 - 10M
RMWA1225-HP	3	200	400	± 100	1 - 10M

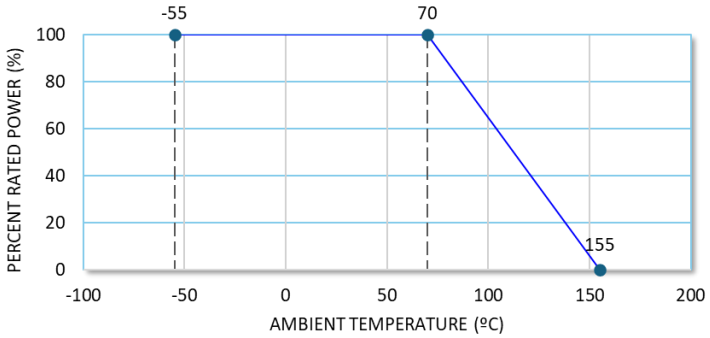
Electrical Specifications - Jumper			
Type/Code	Resistance Value (Ω)	Rated Current (A)	Max Overload Current (A) (<1 second and 1 time)
RMWA0612	0.02 max.	4	15
RMWA1020	0.02 max.	6	22
RMWA1218	0.02 max.	6	22
RMWA1225	0.02 max.	8	30

Mechanical Specifications



Type/Code	L	W	H	I_1	I_2	Unit
RMWA0508	0.049 ± 0.004 1.25 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.022 ± 0.004 0.55 ± 0.10	0.010 ± 0.008 0.25 ± 0.20	0.020 ± 0.008 0.50 ± 0.20	inches mm
RMWA0612	0.063 ± 0.008 1.60 ± 0.20	0.126 ± 0.008 3.20 ± 0.20	0.022 ± 0.004 0.55 ± 0.10	0.012 ± 0.008 0.30 ± 0.20	0.020 ± 0.008 0.50 ± 0.20	inches mm
RMWA1020	0.098 ± 0.008 2.50 ± 0.20	0.197 ± 0.008 5.00 ± 0.20	0.022 ± 0.004 0.55 ± 0.10	0.016 ± 0.008 0.40 ± 0.20	0.030 ± 0.008 0.75 ± 0.20	inches mm
RMWA1218	0.122 ± 0.004 3.10 ± 0.10	0.181 ± 0.004 4.60 ± 0.10	0.022 ± 0.002 0.55 ± 0.05	0.016 ± 0.008 0.40 ± 0.20	0.020 ± 0.008 0.50 ± 0.20	inches mm
RMWA1225	0.126 ± 0.008 3.20 ± 0.20	0.256 ± 0.008 6.50 ± 0.20	0.022 ± 0.008 0.55 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	0.030 ± 0.008 0.75 ± 0.20	inches mm
RMWA1225-HP	0.126 ± 0.008 3.20 ± 0.20	0.256 ± 0.008 6.50 ± 0.20	0.026 ± 0.008 0.65 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	0.030 ± 0.008 0.75 ± 0.20	inches mm

Power Derating Curve:



Power rating or current rating is in the case based on continuous full-load at ambient temperature of 70°C. For operation at ambient temperature in excess of 70°C, the load should be derated in accordance with figure of derating curve.

Voltage Rating or Current Rating

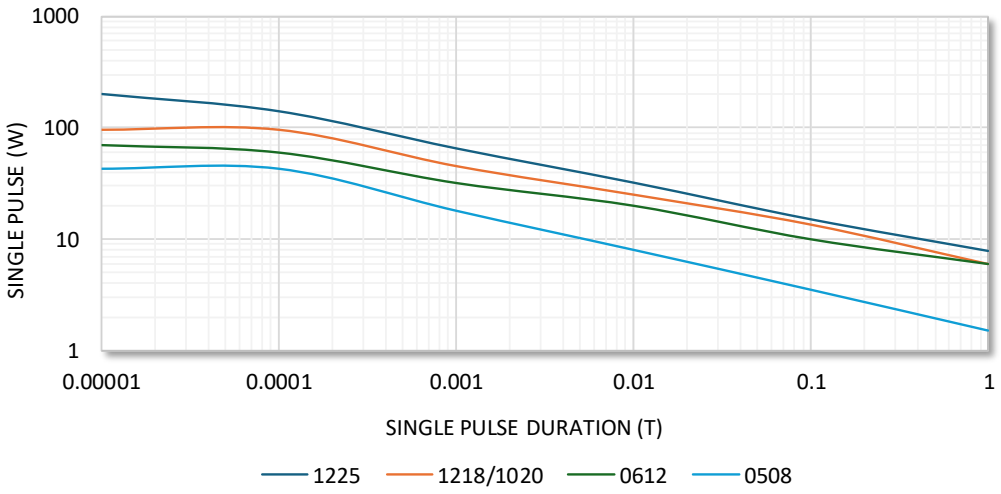
Resistance Range: ≥ 1 Ω
Rated Voltage: The resistor shall have a DC continuous working voltage or a RMS AC continuous working voltage at commercial-line frequency and wave form corresponding to the power rating, as determined formula as following:
E(RCWV)= √(P*R)
E=Rated voltage (V)
P=Power rating (W)
R=Nominal resistance (Ω)

Performance Characteristics			
Test	Test Method	Test Specification	Test Condition
Temperature Coefficient of Resistance (T.C.R.)	JIS-C-5201-1 4.8 IEC-60115-1 4.8	As specified	At 25°C / -55°C and 25°C / +155°C, 25°C is the reference temperature
Short Time Overload	JIS-C-5201-1 4.13 IEC-60115-1 4.13	±1%: ±(1%+0.05Ω) ±5%: ±(2%+0.1Ω) Jumper: Max 0.02Ω after test	Standard: 6.25*Rated Power or Max Overload Voltage, whichever is less for 5 seconds. High Power: 5*Rated Power or Max Overload Voltage, whichever is less for 5 seconds. Jumper: Overload Current for 5 seconds 0612=10 A, 1020=15 A, 1218=15 A, 1225=20 A
Leaching	JIS-C-5201-1 4.18 IEC-60068-2-58 8.2.1	Individual leaching area ≤ 5% Total leaching area ≤ 10%	260 ± 5°C for 30 seconds
Resistance to Soldering Heat	JIS-C-5201-1 4.18 IEC-60115-1 4.18	±1%: ±(0.5%+0.05Ω) ±5%: ±(1%+0.05Ω)	260 ± 5°C for 10 seconds
Insulation Resistance	JIS-C-5201-1 4.6 IEC-60115-1 4.6	≥ 10 GΩ	Apply 100 V_{DC} for 1 minute
Temperature Cycling	JESD22 Method JA-104	±1%: ±(0.5%+0.05Ω) ±5%: ±(1%+0.1Ω)	1000 cycles (-55°C to +125°C). Measurement at 24 ± 4 hours after test conclusion. 30 min. maximum dwell time at each temperature extreme.
Resistance to Solvents	MIL-STD-202 Method 215	±1% and ±5%: ±(0.5%+0.05Ω) Jumper: Max. 0.02Ω after test	Add aqueous wash chemical - OKEM Clean or equivalent.
Biased Humidity	MIL-STD-202 Method 103	±1%: ±(1%+0.05Ω) ±5%: ±(3%+0.05Ω)	1000 hours 85°C / 85% R.H. 10% of operating power. Measurement at 24 ± 4 hours after test conclusion.
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	±1%: ±(0.5%+0.05Ω) ±5%: ±(2%+0.05Ω)	1000 hours at T=155°C. Unpowered. Measurement at 24 ± 4 hours after test conclusion.
Operational Life	MIL-STD-202 Method 108	±1%: ±(1%+0.05Ω) ±5%: ±(3%+0.1Ω)	Condition D Steady State TA=125°C at derated power. Measurement at 24 ± 4 hours after test conclusion.
External Visual	MIL-STD-883 Method 2009	-	Electrical test not required. Inspect device construction, marking and workmanship.
Mechanical Shock	MIL-STD-202 Method 213	±1%: ±(1%+0.05Ω) ±5%: ±(2%+0.1Ω)	Wave form: Tolerance for half sine shock pulse. Peak value is 100 g's. Normal duration (D) is 6 (ms).
Vibration	MIL-STD-202 Method 204	±1%: ±(1%+0.05Ω) ±5%: ±(2%+0.1Ω)	5 g's for 20 minutes, 12 cycles each of 3 orientations. Note: Test from 10-2000 Hz
ESD	AEC-Q200-002 or ISO/DIS 10605	±(3%+0.05Ω)	Human body model 0508 and 0612: 1 KV, 1020 and above: 2 KV
Solderability	J-STD-002	±1%: ±(0.5%+0.05Ω) ±5%: ±(1%+0.05Ω)	(1) 4 hours, 155°C dry heat (2) 245 ± 5°C, 3 seconds
Terminal Strength	AEC-Q200-006	No breakage	Pressurizing force for 60 seconds 0508 and 0612: 8 N; 1020 and above: 17.7 N
Boarding Flex	AEC-Q200-005	±1% and 5%: ±(1%+0.05Ω)	Bending once for 60 seconds all sizes: 3 mm
Sulfur Test	ASTM-B-809-95 EIA-977	ΔR: ±(2%+0.05Ω)	105 ± 2°C, no power rating for 1000 hours (size 0508 not included)

RCWV (Rated Continuous Working Voltage)=√(P*R) or Max. Operating Voltage, whichever is lower

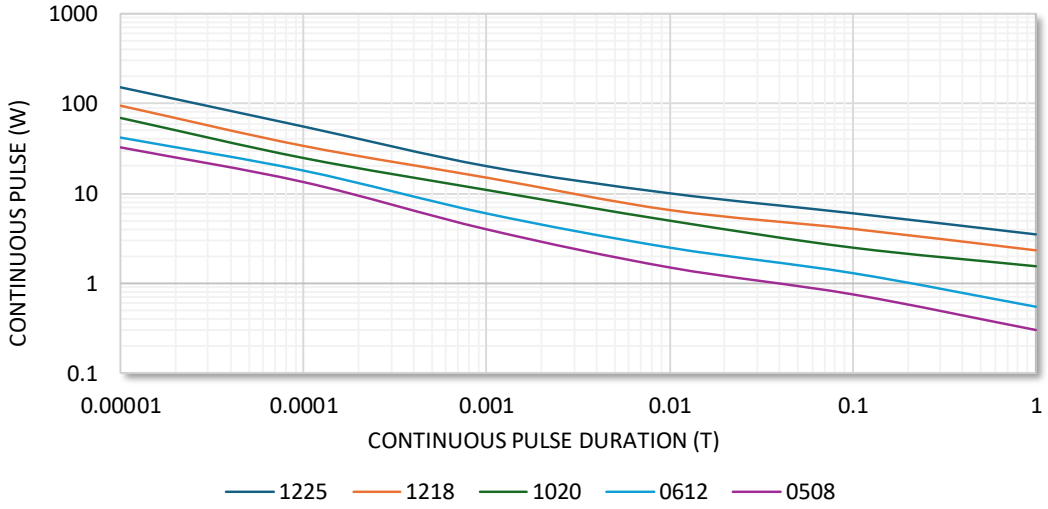
Recommended storage temperature: 15~28°C. Humidity < 80% R.H.

Single Pulse - Standard Power



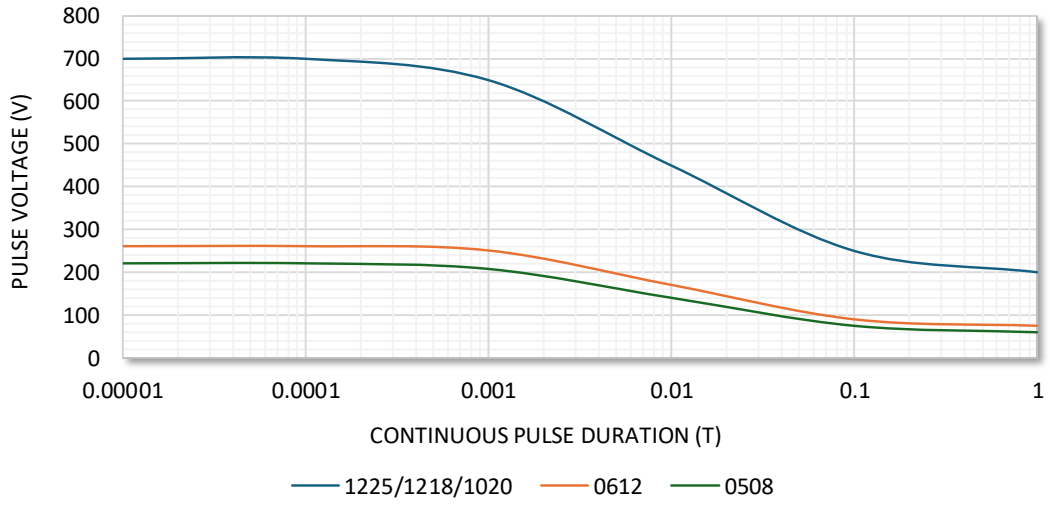
Single Pulse: Applicable rate power at 70°C and Max Working Voltage and Max Overload Voltage

Continuous Pulse - Standard Power



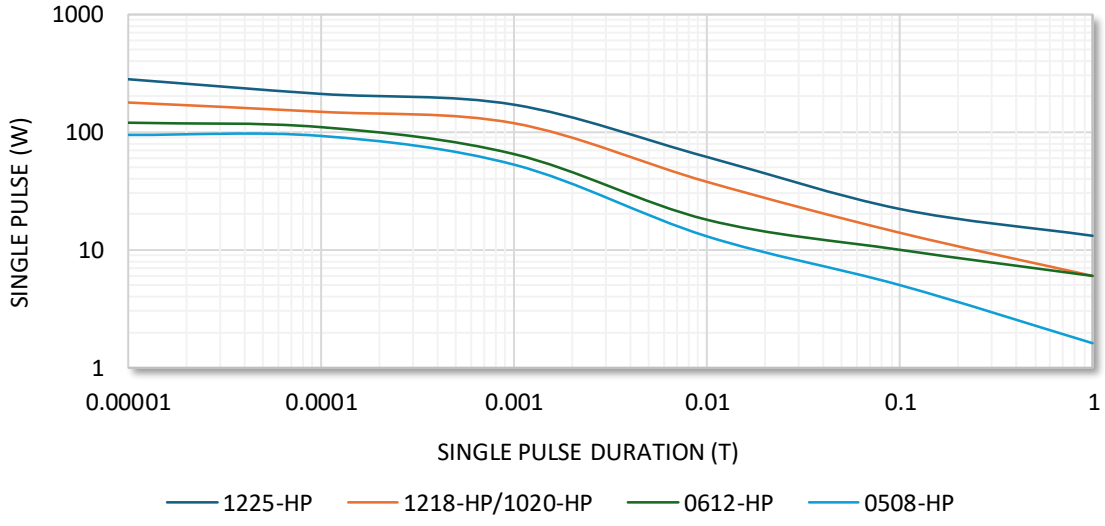
Continuous Pulse: Applicable rate power at 70°C and Max Working voltage and Max Overload Voltage

Pulse Voltage - Standard Power



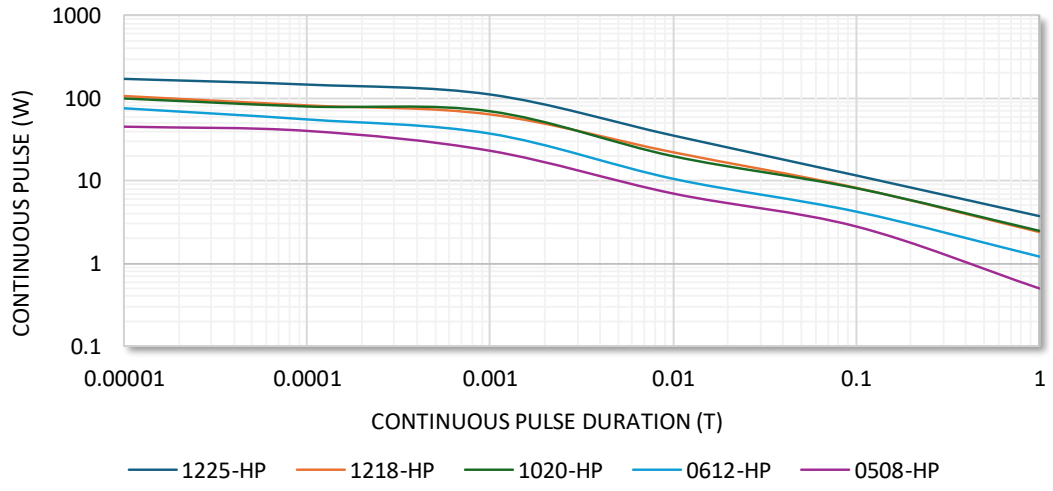
Pulse Voltage: Applicable rate power at 70°C and Max Working Voltage and Max Overload Voltage.

Single Pulse - High Power



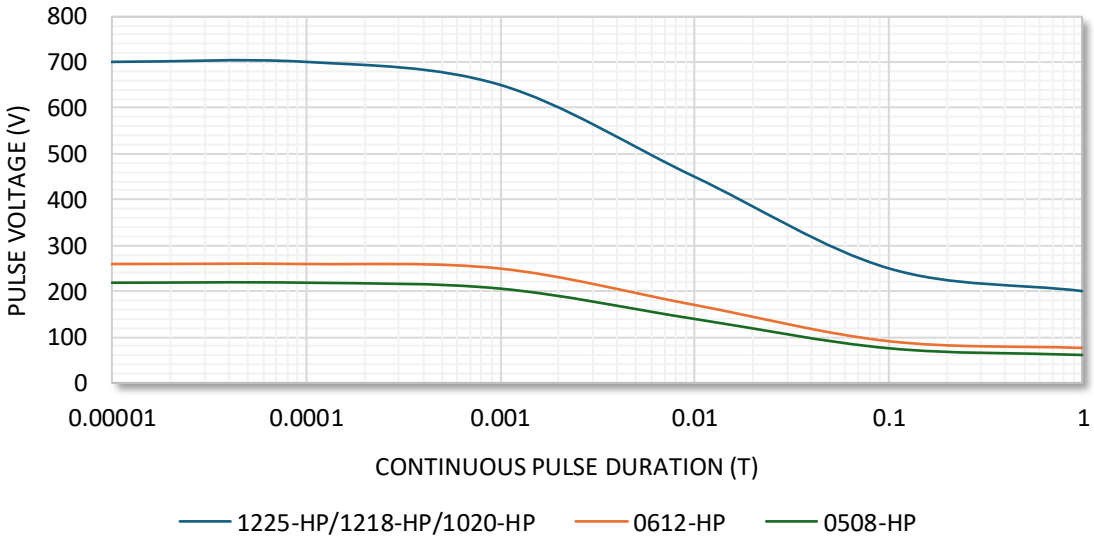
Single Pulse: Applicable rate power at 70°C and Max Working Voltage and Max Overload Voltage

Continuous Pulse - High Power



Continuous Pulse: Applicable rate power at 70°C and Max Working voltage and Max Overload Voltage

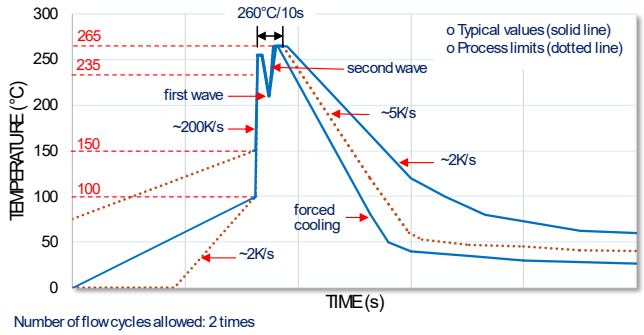
Pulse Voltage - High Power



Pulse Voltage: Applicable rate power at 70°C and Max Working Voltage and Max Overload Voltage.

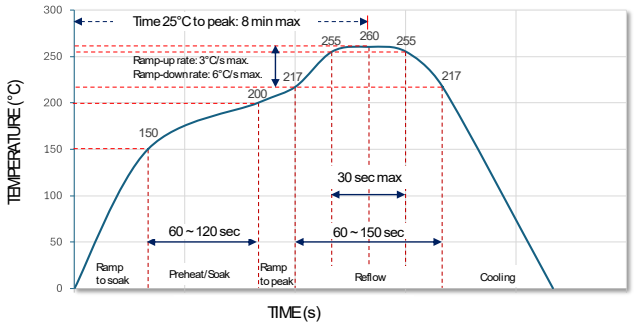
Recommended Resistor Reflow Profile

Wave Solder Temperature Condition



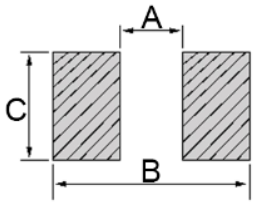
Number of flow cycles allowed: 2 times

Solder Reflow Temperature Condition



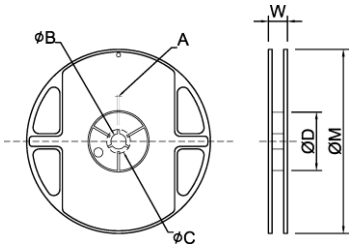
Rework temperature (hot air equipment): 350°C, 3~5 seconds.
Recommended reflow methods: IR, vapor phase oven, hot air oven.
If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Recommended Solder Pad



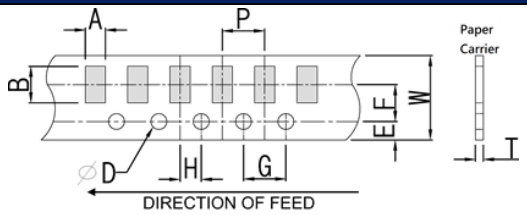
Type/Code	A	B	C	Unit
RMWA0508	0.016 0.40	0.071 1.80	0.079 2.00	inches mm
RMWA0612	0.024 0.60	0.114 2.90	0.126 3.20	inches mm
RMWA1020	0.030 0.75	0.134 3.40	0.197 5.00	inches mm
RMWA1218	0.080 2.04	0.167 4.24	0.189 4.80	inches mm
RMWA1225	0.033 0.85	0.146 3.70	0.252 6.40	inches mm

Reel Specifications



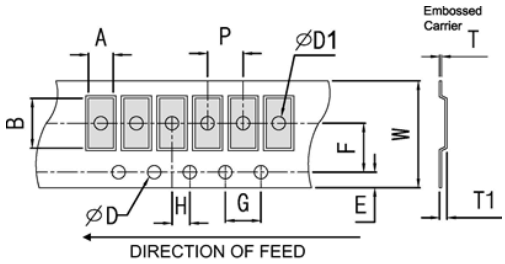
Type/Code	Size		A	B	C	D	W	M	Unit
0508/0612	7"	5K Reel	0.079 ± 0.020 2.00 ± 0.50	0.531 ± 0.039 13.50 ± 1.00	0.827 ± 0.039 21.00 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	0.453 ± 0.079 11.50 ± 2.00	7.008 ± 0.079 178.00 ± 2.00	inches mm
1020/1218/1225	7"	4K Reel	0.079 ± 0.020 2.00 ± 0.50	0.531 ± 0.039 13.50 ± 1.00	0.827 ± 0.039 21.00 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	0.630 ± 0.079 16.00 ± 2.00	7.008 ± 0.079 178.00 ± 2.00	inches mm

Taping Specifications - Paper Tape



Type/Code	A	B	W	E	F	Unit
RMWA0508	0.059 ± 0.006 1.50 ± 0.15	0.089 ± 0.006 2.25 ± 0.15	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
RMWA0612	0.075 ± 0.008 1.90 ± 0.20	0.138 ± 0.008 3.50 ± 0.20	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
Type/Code	G	H	T	D	P	Unit
RMWA0508	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.030 ± 0.004 0.75 ± 0.10	0.061 +0.004/-0 1.55 +0.10/-0	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMWA0612	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.030 ± 0.004 0.75 ± 0.10	0.061 +0.004/-0 1.55 +0.10/-0	0.157 ± 0.004 4.00 ± 0.10	inches mm

Taping Specifications - Plastic Tape



Type/Code	A	B	W	E	F	G	Unit
RMWA1020	0.110 ± 0.008 2.80 ± 0.20	0.220 ± 0.008 5.60 ± 0.20	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMWA1225	0.134 ± 0.008 3.40 ± 0.20	0.264 ± 0.008 6.70 ± 0.20	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMWA1225-HP	0.134 ± 0.008 3.40 ± 0.20	0.264 ± 0.008 6.70 ± 0.20	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMWA1218	0.130 ± 0.008 3.30 ± 0.20	0.181 ± 0.008 4.60 ± 0.20	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm
Type/Code	H	T	D	D1	T1	P	Unit
RMWA1020	0.079 ± 0.002 2.00 ± 0.05	0.009 ± 0.004 0.23 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	0.059 ± 0.004 1.50 ± 0.10	0.033 ± 0.006 0.85 ± 0.15	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMWA1225	0.079 ± 0.002 2.00 ± 0.05	0.009 ± 0.004 0.23 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	0.059 ± 0.004 1.50 ± 0.10	0.033 ± 0.006 0.85 ± 0.15	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMWA1225-HP	0.079 ± 0.002 2.00 ± 0.05	0.009 ± 0.004 0.23 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	0.059 ± 0.004 1.50 ± 0.10	0.039 ± 0.006 1.00 ± 0.15	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMWA1218	0.079 ± 0.002 2.00 ± 0.05	0.009 ± 0.004 0.23 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	0.059 ± 0.004 1.50 ± 0.10	0.033 ± 0.006 0.85 ± 0.15	0.157 ± 0.004 4.00 ± 0.10	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 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)
RMWA	Automotive Grade Wide Terminal Thick Film Chip Resistor	SMD	YES(1)	100% Matte Sn over Ni	Always	Always

Note (1): RoHS compliant by means of exemption 7c-I.

"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

R	M	W	A	0	6	1	2	F	T	1	0	K	0	-	H	P

Product Series
RMWA

Size
0508
0612
1020
1218
1225

Tolerance		
Code	Tol	Value
F	1%	E96, E24
J	5%	
Z	≤ 0.02Ω	Jumper

Packaging			
Code	Description	Size	Quantity
T	7" Reel Paper Tape	0508, 0612	5000
	7" Reel Plastic Tape	1020, 1218, 1225	4000

Resistance Value
Four characters with the multiplier used as the decimal holder.
1 ohm = 1R00 10 Kohm = 10K0 1 Mohm = 1M00 Jumper = 0R00

Special	
Code	Description
(blank)	Standard Power
-HP	High Power