

**Features:**

- Excellent pulse withstanding performance
- Broad resistance range
- Higher anti-surge performance compared with RMCF Series
- Standard power RPC, 5% and wider tolerances, are untrimmed
- 1% and wider tolerances are qualified to AEC-Q200
- RoHS compliant and halogen free
- REACH compliant
- Lower values may be available – contact Stackpole



| Electrical Specifications |                            |                             |                              |              |                               |           |              |
|---------------------------|----------------------------|-----------------------------|------------------------------|--------------|-------------------------------|-----------|--------------|
| Type/Code                 | Power Rating (W)<br>@ 70°C | Maximum Working Voltage (V) | Maximum Overload Voltage (V) | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance |           |              |
|                           |                            |                             |                              |              | 0.5%                          | 1%        | 5%, 10%, 20% |
| RPC0402                   | 0.2                        | 50                          | 100                          | ±300         | -                             | 1 - 20    |              |
|                           |                            |                             |                              | ±100         | 100 - 1M                      | 20.5 - 1M | 22 - 1M      |
| RPC0603                   | 0.1                        | 50                          | 100                          | ±200         | 10 - 294                      | 1 - 294   | 10 - 270     |
|                           |                            |                             |                              | ±100         | 300 - 1M                      |           |              |
| RPC0805                   | 0.25                       | 150                         | 300                          | ±200         | 10 - 294                      | 1 - 294   | 1 - 270      |
|                           |                            |                             |                              | ±100         | 300 - 20M                     |           |              |
| RPC1206                   | 0.33                       | 200                         | 400                          | ±200         | 10 - 20                       | 1 - 20    |              |
|                           |                            |                             |                              | ±100         | 20.5 - 20M                    |           | 22 - 20M     |
| RPC1210                   | 0.5                        | 200                         | 400                          | ±200         | 10 - 20                       | 1 - 20    |              |
|                           |                            |                             |                              | ±100         | 20.5 - 20M                    |           | 22 - 20M     |
| RPC2010                   | 0.75                       | 400                         | 800                          | ±200         | 10 - 20                       | 1 - 20    |              |
|                           |                            |                             |                              | ±100         | 20.5 - 20M                    |           | 22 - 20M     |
| RPC2512                   | 1.5                        | 500                         | 1000                         | ±200         | 10 - 20                       | 1 - 20    |              |
|                           |                            |                             |                              | ±100         | 20.5 - 20M                    |           | 22 - 20M     |

Working Voltage =  $\sqrt{P \cdot R}$  or Max. Working Voltage listed above, whichever is lower.

Overload Voltage =  $2.5 \cdot \sqrt{P \cdot R}$  or Max. Overload Voltage listed above, whichever is lower.

| Electrical Specifications – High Power (HP) |                            |                             |                              |              |                               |         |          |
|---|----------------------------|-----------------------------|------------------------------|--------------|-------------------------------|---------|----------|
| Type/Code                                   | Power Rating (W)<br>@ 70°C | Maximum Working Voltage (V) | Maximum Overload Voltage (V) | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance |         |          |
|   |                            |                             |                              |              | 0.5%                          | 1%      | 5%       |
| RPC0603_-HP                                 | 0.25                       | 75                          | 150                          | ±200         | 10 - 294                      | 1 - 294 | 10 - 270 |
|   |                            |                             |                              | ±100         | 300 - 1M                      |         |          |
| RPC0805_-HP                                 | 0.4                        | 150                         | 300                          | ±200         | 10 - 294                      | 1 - 294 | 1 - 270  |
|   |                            |                             |                              | ±100         | 300 - 1M                      |         |          |
| RPC1206_-HP                                 | 0.5                        | 200                         | 400                          | ±200         | 10 - 20                       | 1 - 20  |          |
|   |                            |                             |                              | ±100         | 20.5 - 1M                     |         | 22 - 1M  |
| RPC1210_-HP                                 | 0.75                       | 200                         | 400                          | ±200         | 10 - 20                       | 1 - 20  |          |
|   |                            |                             |                              | ±100         | 20.5 - 1M                     |         | 22 - 1M  |
| RPC2010_-HP                                 | 1                          | 400                         | 800                          | ±200         | 10 - 20                       | 1 - 20  |          |
|   |                            |                             |                              | ±100         | 20.5 - 1M                     |         | 22 - 1M  |
| RPC2512_-HP <sup>(*)</sup>                  | 2                          | 500                         | 1000                         | ±350         | 10                            | 1 - 10  |          |
|   |                            |                             |                              | ±100         | 10.5 - 200K                   |         |          |

(\*) Double-sided printed resistor element.

Working Voltage =  $\sqrt{P \cdot R}$  or Max. Working Voltage listed above, whichever is lower.

Overload Voltage =  $2.5 \cdot \sqrt{P \cdot R}$  or Max. Overload Voltage listed above, whichever is lower.

**Electrical Specifications – Ultra High Power (UP)**

| Type/Code   | Power Rating (W)<br>@ 70°C | Maximum Working Voltage (V) | Maximum Overload Voltage (V) | TCR (ppm/°C) | Ohmic Range (Ω) and Tolerance |         |         |
|-------------|----------------------------|-----------------------------|------------------------------|--------------|-------------------------------|---------|---------|
|             |                            |                             |                              |              | 0.5%                          | 1%      | 5%      |
| RPC0805_-UP | 0.5                        | 400                         | 600                          | ±200         | 10 - 294                      | 1 - 294 | 1 - 270 |
|             |                            |                             |                              | ±100         | 300 - 1M                      |         |         |
| RPC1206_-UP | 0.75                       | 500                         | 1000                         | ±200         | 10 - 20                       | 1 - 20  |         |
|             |                            |                             |                              | ±100         | 20.5 - 1M                     |         | 22 - 1M |

Ultra High Power: double side printed resistor element.

Working Voltage =  $\sqrt{P \cdot R}$  or Max. Working Voltage listed above, whichever is lower.

Overload Voltage =  $2.5 \cdot \sqrt{P \cdot R}$  or Max. Overload Voltage listed above, whichever is lower.

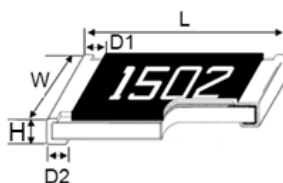
**Electrical Specifications – Ultra High Power Jumper**

| Type/Code   | Jumper Rated Current (A) | Max. Resistance |
|-------------|--------------------------|-----------------|
| RPC0805_-UP | 6                        | 0.005 max.      |
| RPC1206_-UP | 10                       |                 |

RPC0603-UP zero ohm jumper with 5A current rating also available.

Ultra High Power: double side printed resistor element.

**Mechanical Specifications**



| Type/Code    | Weight (g)<br>(1000 pcs) | L<br>Body Length | W<br>Body Width | H<br>Body Height | D1<br>Top Termination | D2<br>Bottom Termination | Unit   |
|--------------|--------------------------|------------------|-----------------|------------------|-----------------------|--------------------------|--------|
| RPC0402      | 0.64                     | 0.039 ± 0.002    | 0.020 ± 0.002   | 0.014 ± 0.002    | 0.008 ± 0.004         | 0.008 ± 0.004            | inches |
|              |                          | 1.00 ± 0.05      | 0.50 ± 0.05     | 0.35 ± 0.05      | 0.20 ± 0.10           | 0.20 ± 0.10              | mm     |
| RPC0603 (HP) | 2.042                    | 0.063 ± 0.004    | 0.031 ± 0.004   | 0.018 ± 0.004    | 0.012 ± 0.008         | 0.012 ± 0.008            | inches |
|              |                          | 1.60 ± 0.10      | 0.80 ± 0.10     | 0.45 ± 0.10      | 0.30 ± 0.20           | 0.30 ± 0.20              | mm     |
| RPC0805 (HP) | 4.368                    | 0.079 ± 0.004    | 0.049 ± 0.004   | 0.020 ± 0.004    | 0.014 ± 0.008         | 0.016 ± 0.008            | inches |
|              |                          | 2.00 ± 0.10      | 1.25 ± 0.10     | 0.50 ± 0.10      | 0.35 ± 0.20           | 0.40 ± 0.20              | mm     |
| RPC0805_-UP  | 5.049                    | 0.079 ± 0.004    | 0.049 ± 0.004   | 0.020 ± 0.004    | 0.014 ± 0.008         | 0.016 ± 0.008            | inches |
|              |                          | 2.00 ± 0.10      | 1.25 ± 0.10     | 0.50 ± 0.10      | 0.35 ± 0.20           | 0.40 ± 0.20              | mm     |
| RPC1206 (HP) | 8.947                    | 0.122 ± 0.004    | 0.061 ± 0.004   | 0.022 ± 0.004    | 0.020 ± 0.010         | 0.020 ± 0.008            | inches |
|              |                          | 3.10 ± 0.10      | 1.55 ± 0.10     | 0.55 ± 0.10      | 0.50 ± 0.25           | 0.50 ± 0.20              | mm     |
| RPC1206_-UP  | 9.541                    | 0.122 ± 0.004    | 0.061 ± 0.004   | 0.022 ± 0.004    | 0.020 ± 0.010         | 0.020 ± 0.008            | inches |
|              |                          | 3.10 ± 0.10      | 1.55 ± 0.10     | 0.55 ± 0.10      | 0.50 ± 0.25           | 0.50 ± 0.20              | mm     |
| RPC1210 (HP) | 15.959                   | 0.122 ± 0.004    | 0.102 ± 0.006   | 0.022 ± 0.004    | 0.020 ± 0.010         | 0.020 ± 0.008            | inches |
|              |                          | 3.10 ± 0.10      | 2.60 ± 0.15     | 0.55 ± 0.10      | 0.50 ± 0.25           | 0.50 ± 0.20              | mm     |
| RPC2010 (HP) | 24.241                   | 0.197 ± 0.004    | 0.098 ± 0.006   | 0.022 ± 0.004    | 0.024 ± 0.010         | 0.020 ± 0.008            | inches |
|              |                          | 5.00 ± 0.10      | 2.50 ± 0.15     | 0.55 ± 0.10      | 0.60 ± 0.25           | 0.50 ± 0.20              | mm     |
| RPC2512      | 39.448                   | 0.250 ± 0.004    | 0.122 ± 0.006   | 0.022 ± 0.004    | 0.024 ± 0.010         | 0.020 ± 0.008            | inches |
|              |                          | 6.35 ± 0.10      | 3.10 ± 0.15     | 0.55 ± 0.10      | 0.60 ± 0.25           | 0.50 ± 0.20              | mm     |
| RPC2512 (HP) | 42                       | 0.250 ± 0.008    | 0.124 ± 0.006   | 0.024 ± 0.004    | 0.024 ± 0.010         | 0.020 ± 0.008            | inches |
|              |                          | 6.35 ± 0.20      | 3.15 ± 0.15     | 0.60 ± 0.10      | 0.60 ± 0.25           | 0.50 ± 0.20              | mm     |

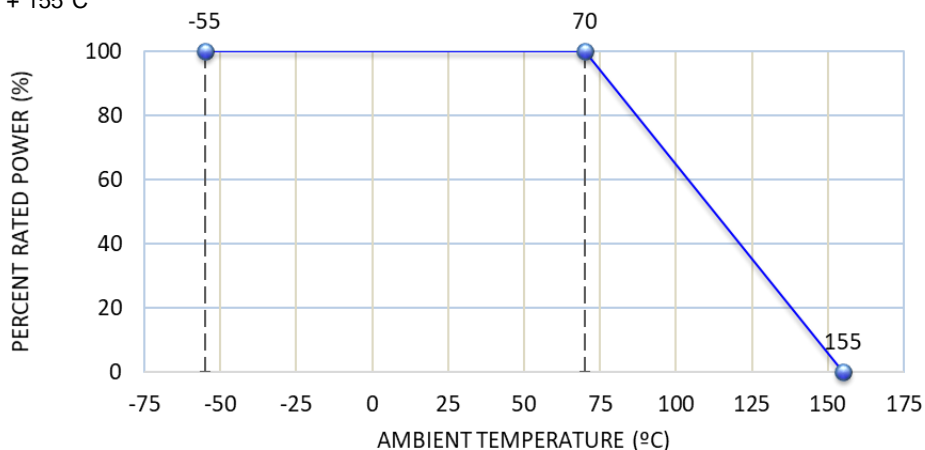
| Performance Characteristics                                |   |  |  |
|--|---|--|--|
| Item   | Test Method                               | Test Specification   | Test Condition   |
| Temperature Coefficient of Resistance (T.C.R.)             | JIS-C-5201-1 4.8<br>IEC-60115-1 4.8       | Within the specified tolerance                             | At 25°C / -55°C and 25°C / + 125°C, 25°C is the reference temperature  |
| Short Time Overload  | JIS-C-5201-1 4.13<br>IEC-60115-1 4.13     | ± (1% + 0.05Ω)   | RCWV * 2.5 or max. overload voltage whichever is lower for 5 seconds<br>Jumper: 2*I <sub>max</sub> for 5 seconds |
| Insulation Resistance                                      | JIS-C-5201-1 4.6<br>IEC-60115-1 4.6       | ≥ 10G  | Max. overload voltage for 1 minute   |
| Endurance<br>Tolerances of 0.5%, 1%                        | JIS-C-5201-1 4.25<br>IEC-60115-1 4.25.1   | ± (1% + 0.05Ω)   | 70°C ± 2°C, RCWV for 1000 hours with 1.5 hours "ON" and 0.5 hour "OFF"   |
| Endurance<br>Tolerances of 5%, 10%, 20%                    | JIS-C-5201-1 4.25<br>IEC-60115-1 4.25.1   | ± (3% + 0.05Ω)   | 70°C ± 2°C, RCWV for 1000 hours with 1.5 hours "ON" and 0.5 hour "OFF"   |
| Damp Heat with Load<br>Tolerances of 0.5%, 1%              | JIS-C-5201-1 4.24<br>IEC-60115-1 4.24     | ± (0.5% + 0.05Ω)   | 40°C ± 2°C, 90~95% R.H, RCWV for 1000 hour with 1.5 hours "ON" and 0.5 hour "OFF"                                |
| Damp Heat with Load<br>Tolerances of 5%, 10%, 20%          | JIS-C-5201-1 4.24<br>IEC-60115-1 4.24     | ± (3% + 0.05Ω)   | 40°C ± 2°C, 90~95% R.H, RCWV for 1000 hours with 1.5 hours "ON" and 0.5 hour "OFF"                               |
| Damp Heat with Load<br>Ultra High Power                    | JIS-C-5201-1 4.24<br>IEC-60115-1 4.24     | ± (1% + 0.05Ω)   |  |
| Dry Heat<br>Tolerances of 0.5%, 1%                         | JIS-C-5201-1 4.23<br>IEC-60115-1 2.23.2   | ± (0.5% + 0.05Ω)   | At +155°C for 1000 hours   |
| Dry Heat<br>Tolerances of 5%, 10%, 20%                     | JIS-C-5201-1 4.23<br>IEC-60115-1 2.23.2   | ± (3% + 0.05Ω)   | At +155°C for 1000 hours   |
| Bending Strength   | JIS-C-5201-1 4.33<br>IEC-60115-1 4.33     | ± (1% + 0.05Ω)   | Bending once for 5 seconds<br>2010, 2512 sizes: 2mm; other sizes: 3mm  |
| Solderability  | JIS-C-5201-1 4.17<br>IEC-60115-1 4.17     | 95% min. coverage  | 245°C ± 5°C for 3 seconds  |
| Resistance to Soldering Heat<br>tolerances of 0.5%, 1%     | JIS-C-5201-1 4.18<br>IEC-60115-1 4.18     | ± (0.5% + 0.05Ω)   | 260°C ± 5°C for 10 seconds   |
| Resistance to Soldering Heat<br>tolerances of 5%, 10%, 20% | JIS-C-5201-1 4.18<br>IEC-60115-1 4.18     | ± (1% + 0.05Ω)   | 260°C ± 5°C for 10 seconds   |
| Voltage Proof  | JIS-C-5201-1 4.7<br>IEC-60115-1 4.7       | No Breakdown or flashover                                  | 1.42 times max. operating voltage for 1 minute   |
| Leaching   | JIS-C-5201-1 4.18<br>IEC-60068-2-58-8.2.1 | Individual leaching area ≤ 5%<br>Total leaching area ≤ 10% | 260°C ± 5°C for 30 seconds   |
| Rapid Change of Temperature<br>tolerances of 0.5%, 1%      | JIS-C-5201-1 4.18<br>IEC-60115-1 4.18     | ± (0.5% + 0.05Ω)   | -55°C to + 150°C , 5 cycles  |
| Rapid Change of Temperature<br>tolerances of 5%, 10%, 20%  | JIS-C-5201-1 4.18<br>IEC-60115-1 4.18     | ± (1% + 0.05Ω)   | -55°C to + 150°C , 5 cycles  |

RCWV (Rated Continuous Working Voltage)=  $\sqrt{P \cdot R}$  or Max. Working Voltage whichever is lower.

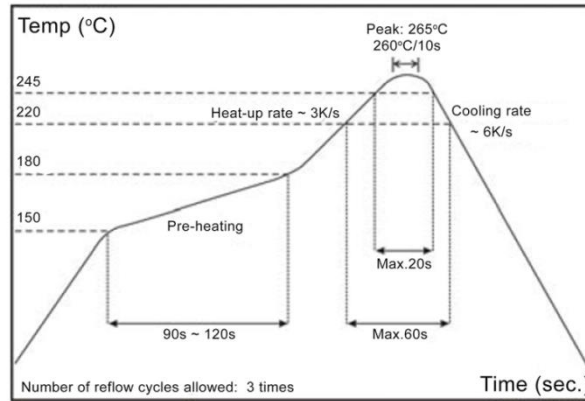
Storage Temperature: 15 ~ 28°C; humidity < 80% R.H.

Operating temperature range is - 55°C + 155°C

**Power Derating Curve:**

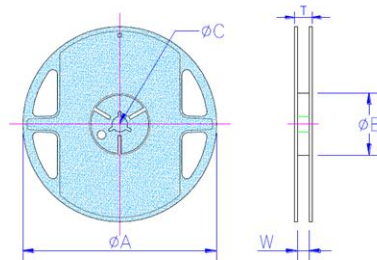


Soldering Condition:



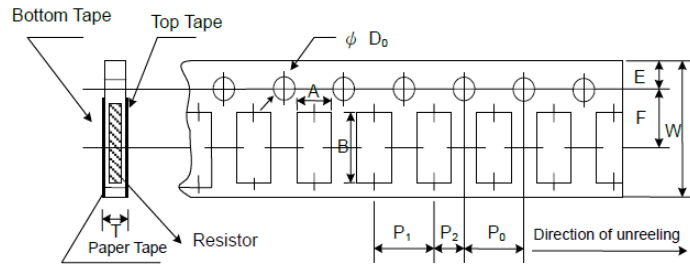
IR Reflow Soldering

**Reel Specifications**



| Type/Code | Packaging | Tape Width | Reel Diameter | A             | B                 | C             | W             | T             | Unit   |
|-----------|-----------|------------|---------------|---------------|-------------------|---------------|---------------|---------------|--------|
| RPC0402   | Paper     | 8 mm       | 7 inches      | 7.028 ± 0.059 | 2.362 +0.039 / -0 | 0.512 ± 0.008 | 0.354 ± 0.020 | 0.492 ± 0.020 | inches |
|           |           |            |               | 178.50 ± 1.50 | 60 +1 / -0        | 13.00 ± 0.20  | 9.00 ± 0.50   | 12.50 ± 0.50  | mm     |
| RPC0603   |           |            |               | 7.028 ± 0.059 | 2.362 +0.039 / -0 | 0.512 ± 0.008 | 0.354 ± 0.020 | 0.492 ± 0.020 | inches |
|           |           |            |               | 178.50 ± 1.50 | 60 +1 / -0        | 13.00 ± 0.20  | 9.00 ± 0.50   | 12.50 ± 0.50  | mm     |
| RPC0805   |           |            |               | 7.028 ± 0.059 | 2.362 +0.039 / -0 | 0.512 ± 0.008 | 0.354 ± 0.020 | 0.492 ± 0.020 | inches |
|           |           |            |               | 178.50 ± 1.50 | 60 +1 / -0        | 13.00 ± 0.20  | 9.00 ± 0.50   | 12.50 ± 0.50  | mm     |
| RPC1206   | Embossed  | 12 mm      | 7 inches      | 7.028 ± 0.059 | 2.362 +0.039 / -0 | 0.512 ± 0.008 | 0.354 ± 0.020 | 0.492 ± 0.020 | inches |
|           |           |            |               | 178.50 ± 1.50 | 60 +1 / -0        | 13.00 ± 0.20  | 9.00 ± 0.50   | 12.50 ± 0.50  | mm     |
| RPC1210   |           |            |               | 7.028 ± 0.059 | 2.362 +0.039 / -0 | 0.512 ± 0.008 | 0.354 ± 0.020 | 0.492 ± 0.020 | inches |
|           |           |            |               | 178.50 ± 1.50 | 60 +1 / -0        | 13.00 ± 0.20  | 9.00 ± 0.50   | 12.50 ± 0.50  | mm     |
| RPC2010   |           |            |               | 7.028 ± 0.059 | 2.362 +0.039 / -0 | 0.512 ± 0.020 | 0.512 ± 0.020 | 0.610 ± 0.020 | inches |
|           |           |            |               | 178.50 ± 1.50 | 60 +1 / -0        | 13.00 ± 0.50  | 13.00 ± 0.50  | 15.50 ± 0.50  | mm     |
| RPC2512   |           |            |               | 7.028 ± 0.059 | 2.362 +0.039 / -0 | 0.512 ± 0.020 | 0.512 ± 0.020 | 0.610 ± 0.020 | inches |
|           |           |            |               | 178.50 ± 1.50 | 60 +1 / -0        | 13.00 ± 0.50  | 13.00 ± 0.50  | 15.50 ± 0.50  | mm     |

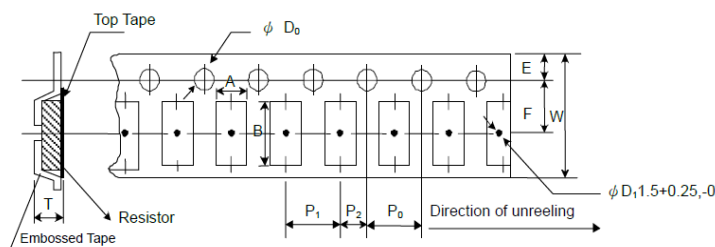
**Packaging Specifications - Paper Tape**



| Type/Code | A             | B             | W             | E             | F             | Unit   |
|-----------|---------------|---------------|---------------|---------------|---------------|--------|
| RPC0402   | 0.026 ± 0.004 | 0.045 ± 0.004 | 0.315 ± 0.008 | 0.069 ± 0.004 | 0.138 ± 0.002 | inches |
|           | 0.65 ± 0.10   | 1.15 ± 0.10   | 8.00 ± 0.20   | 1.75 ± 0.10   | 3.50 ± 0.05   | mm     |
| RPC0603   | 0.043 ± 0.004 | 0.075 ± 0.004 | 0.315 ± 0.008 | 0.069 ± 0.004 | 0.138 ± 0.002 | inches |
|           | 1.10 ± 0.10   | 1.90 ± 0.10   | 8.00 ± 0.20   | 1.75 ± 0.10   | 3.50 ± 0.05   | mm     |
| RPC0805   | 0.063 ± 0.004 | 0.094 ± 0.008 | 0.315 ± 0.008 | 0.069 ± 0.004 | 0.138 ± 0.002 | inches |
|           | 1.60 ± 0.10   | 2.40 ± 0.20   | 8.00 ± 0.20   | 1.75 ± 0.10   | 3.50 ± 0.05   | mm     |
| RPC1206   | 0.075 ± 0.004 | 0.138 ± 0.008 | 0.315 ± 0.008 | 0.069 ± 0.004 | 0.138 ± 0.002 | inches |
|           | 1.90 ± 0.10   | 3.50 ± 0.20   | 8.00 ± 0.20   | 1.75 ± 0.10   | 3.50 ± 0.05   | mm     |
| RPC1210   | 0.114 ± 0.004 | 0.138 ± 0.008 | 0.315 ± 0.008 | 0.069 ± 0.004 | 0.138 ± 0.002 | inches |
|           | 2.90 ± 0.10   | 3.50 ± 0.20   | 8.00 ± 0.20   | 1.75 ± 0.10   | 3.50 ± 0.05   | mm     |

| Type/Code | P <sub>0</sub> | P <sub>1</sub> | P <sub>2</sub> | ØD <sub>0</sub> | T             | Unit   |
|-----------|----------------|----------------|----------------|-----------------|---------------|--------|
| RPC0402   | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.079 ± 0.002  | 0.059 ± 0.004   | 0.018 ± 0.004 | inches |
|           | 4.00 ± 0.10    | 2.00 ± 0.05    | 2.00 ± 0.05    | 1.50 ± 0.10     | 0.45 ± 0.10   | mm     |
| RPC0603   | 0.157 ± 0.004  | 0.157 ± 0.002  | 0.079 ± 0.002  | 0.059 ± 0.004   | 0.028 ± 0.004 | inches |
|           | 4.00 ± 0.10    | 4.00 ± 0.05    | 2.00 ± 0.05    | 1.50 ± 0.10     | 0.70 ± 0.10   | mm     |
| RPC0805   | 0.157 ± 0.004  | 0.157 ± 0.002  | 0.079 ± 0.002  | 0.059 ± 0.004   | 0.033 ± 0.004 | inches |
|           | 4.00 ± 0.10    | 4.00 ± 0.05    | 2.00 ± 0.05    | 1.50 ± 0.10     | 0.85 ± 0.10   | mm     |
| RPC1206   | 0.157 ± 0.004  | 0.157 ± 0.002  | 0.079 ± 0.002  | 0.059 ± 0.004   | 0.033 ± 0.004 | inches |
|           | 4.00 ± 0.10    | 4.00 ± 0.05    | 2.00 ± 0.05    | 1.50 ± 0.10     | 0.85 ± 0.10   | mm     |
| RPC1210   | 0.157 ± 0.004  | 0.157 ± 0.002  | 0.079 ± 0.002  | 0.059 ± 0.004   | 0.033 ± 0.004 | inches |
|           | 4.00 ± 0.10    | 4.00 ± 0.05    | 2.00 ± 0.05    | 1.50 ± 0.10     | 0.85 ± 0.10   | mm     |

**Packaging Specifications – Embossed Plastic Tape**



| Type/Code | A              | B              | W              | E               | F             | Unit   |
|-----------|----------------|----------------|----------------|-----------------|---------------|--------|
| RPC2010   | 0.110 ± 0.004  | 0.217 ± 0.004  | 0.472 ± 0.012  | 0.069 ± 0.004   | 0.217 ± 0.002 | inches |
|           | 2.80 ± 0.10    | 5.50 ± 0.10    | 12.00 ± 0.30   | 1.75 ± 0.10     | 5.50 ± 0.05   | mm     |
| RPC2512   | 0.138 ± 0.004  | 0.264 ± 0.004  | 0.472 ± 0.012  | 0.069 ± 0.004   | 0.217 ± 0.002 | inches |
|           | 3.50 ± 0.10    | 6.70 ± 0.10    | 12.00 ± 0.30   | 1.75 ± 0.10     | 5.50 ± 0.05   | mm     |
| Type/Code | P <sub>0</sub> | P <sub>1</sub> | P <sub>2</sub> | ØD <sub>0</sub> | T             | Unit   |
| RPC2010   | 0.157 ± 0.004  | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.059 ± 0.004   | 0.047 - 0.000 | inches |
|           | 4.00 ± 0.10    | 4.00 ± 0.10    | 2.00 ± 0.05    | 1.50 ± 0.10     | 1.20 - 0.00   | mm     |
| RPC2512   | 0.157 ± 0.004  | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.059 ± 0.004   | 0.047 - 0.000 | inches |
|           | 4.00 ± 0.10    | 4.00 ± 0.10    | 2.00 ± 0.05    | 1.50 ± 0.10     | 1.20 - 0.00   | mm     |

### Marking

- No marking for 0402
- 3-digit marking for 0603 in E24

| 3-digit marking for 0603 in E24 |  |
|---------------------------------|--|
| Example:                        |  |
| 101 = 100 Ω                     |  |
| 102 = 1K Ω                      |  |

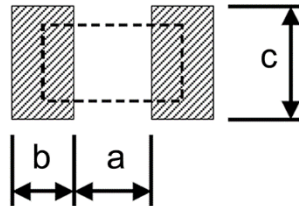
**101** 1st and 2nd digits are E24 code  
3rd digit is the multiplier

| E24 Code | 10 | 11 | 12 | 13 | 15 | 16 | 18 | 20 | 22 | 24 | 27 | 30 | 33 | 36 | 39 | 43 | 47 | 51 | 56 | 62 | 68 | 75 | 82 | 91 |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

- 4-digit marking for 0805-2512

| 4-digit marking for 0805-2512 |       |        |       |        |      |
|-------------------------------|-------|--------|-------|--------|------|
| Resistance                    | 100 Ω | 2.2K Ω | 10K Ω | 100K Ω | 1M Ω |
| Marking                       | 1000  | 2201   | 1002  | 1003   | 1004 |

### Recommended Pad Layout

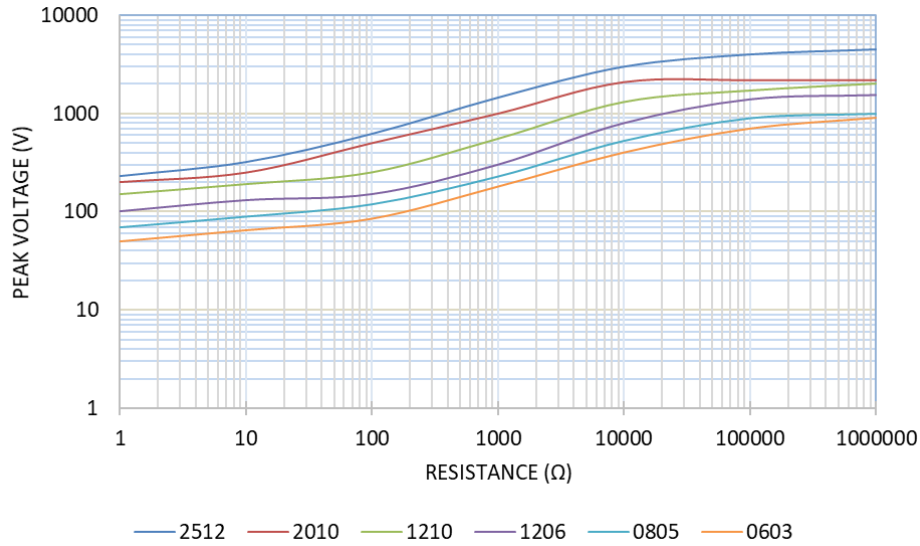


| Type/Code | a     | b     | c     | Unit   |
|-----------|-------|-------|-------|--------|
| RPC0402   | 0.020 | 0.018 | 0.024 | inches |
|           | 0.50  | 0.45  | 0.60  | mm     |
| RPC0603   | 0.035 | 0.024 | 0.035 | inches |
|           | 0.90  | 0.60  | 0.90  | mm     |
| RPC0805   | 0.047 | 0.028 | 0.051 | inches |
|           | 1.20  | 0.70  | 1.30  | mm     |
| RPC1206   | 0.079 | 0.035 | 0.063 | inches |
|           | 2.00  | 0.90  | 1.60  | mm     |
| RPC1210   | 0.079 | 0.035 | 0.110 | inches |
|           | 2.00  | 0.90  | 2.80  | mm     |
| RPC2010   | 0.150 | 0.035 | 0.110 | inches |
|           | 3.80  | 0.90  | 2.80  | mm     |
| RPC2512   | 0.193 | 0.039 | 0.134 | inches |
|           | 4.90  | 1.00  | 3.40  | mm     |

**Lightning Surge**

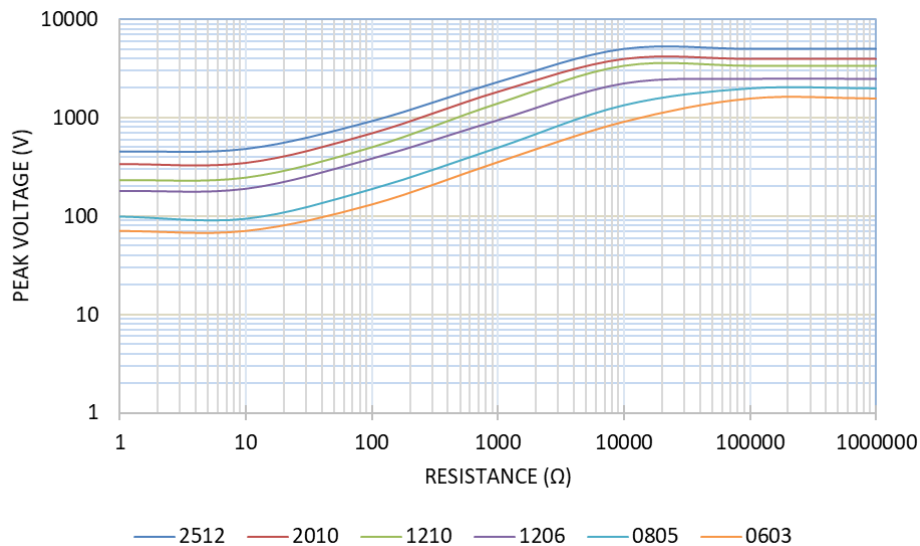
Resistors are tested in accordance with IEC 60115-1 using both 1.2 / 50 us and 10 / 700 pulse shapes. The limit of acceptance is a shift in resistance of less than 1% from the initial value.

1.2/50us Lightning Surge (\*)  
RPC (Standard Power) tolerances of 0.5% and 1%  
RPC-HP (High Power) all tolerances  
RPC-UP (Ultra High Power) all tolerances

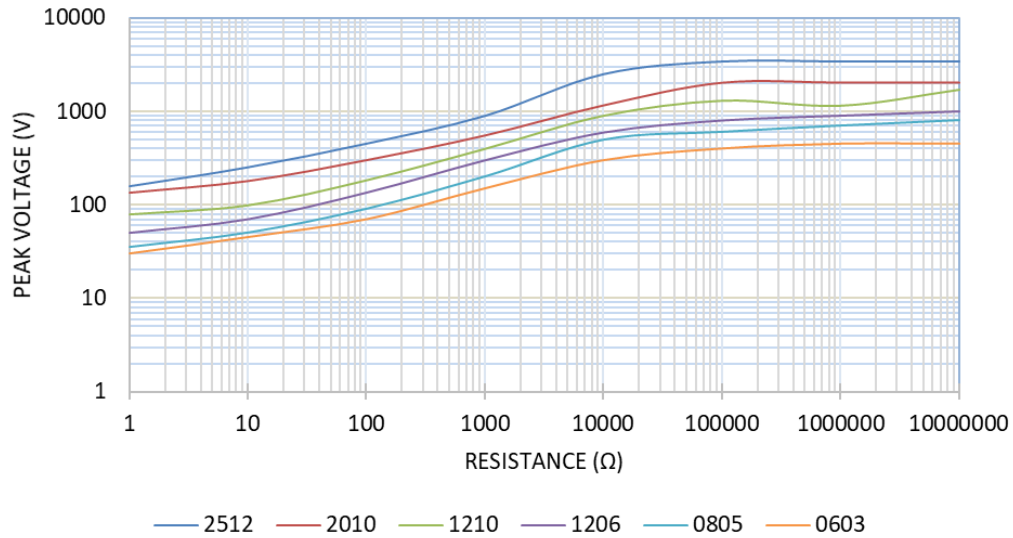


(\*) Note: Data provided shows typical performance and is for reference only.

1.2/50us Lightning Surge (\*)  
RPC (Standard Power)  
Tolerances of 5%, 10% and 20%

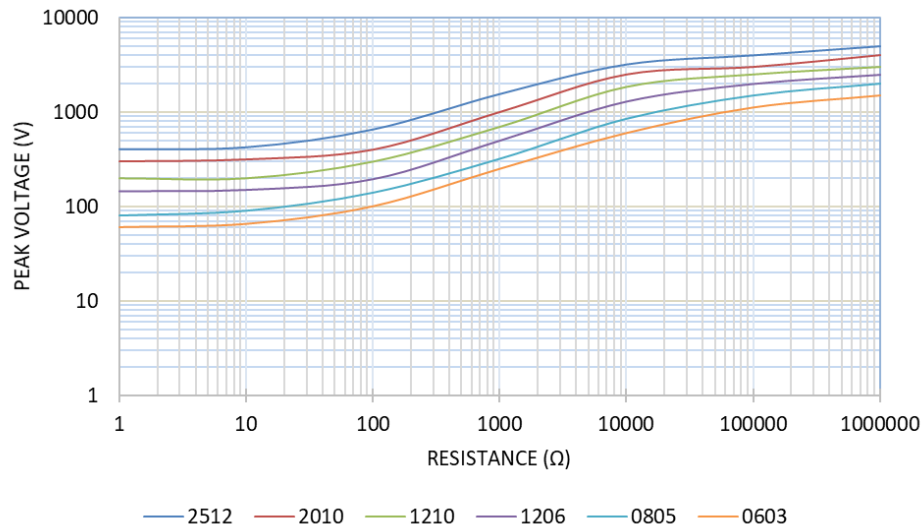


10/700us Lightning Surge (\*)  
RPC (Standard Power) tolerances of 0.5% and 1%  
RPC-HP (High Power) all tolerances  
RPC-UP (Ultra High Power) all tolerances



(\*) Note: Data provided shows typical performance and is for reference only.

10/700us Lightning Surge (\*)  
RPC (Standard Power)  
Tolerances of 5%, 10% and 20%



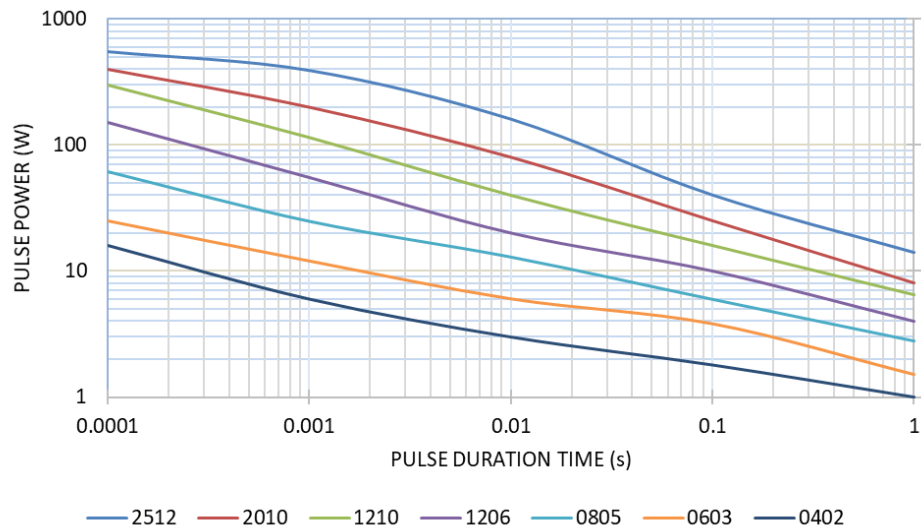
(\*) Note: Data provided shows typical performance and is for reference only.



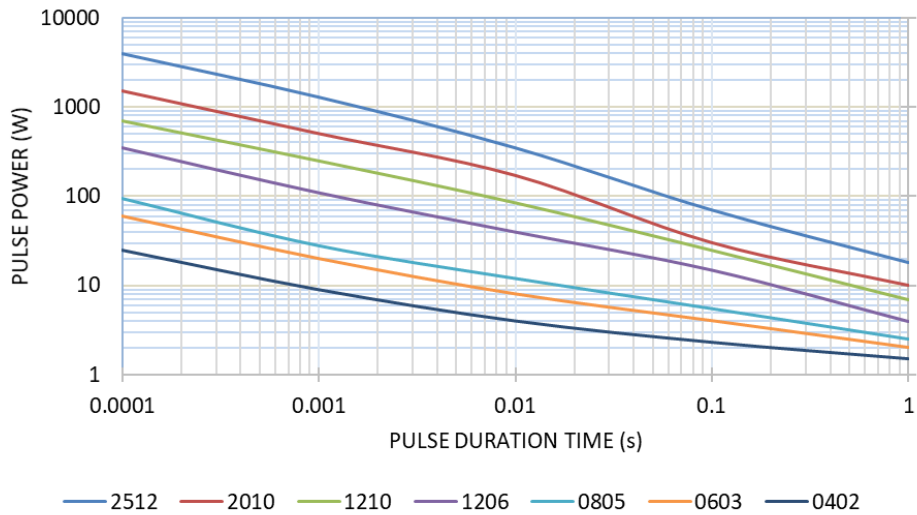
Pulse Withstand Capacity

The single impulse graph is the result of 50 impulses of rectangular shape applied at one-minute intervals. The limit of acceptance was a shift in resistance of less than 1% from the initial value. The power applied was subject to the restrictions of the maximum permissible impulse voltage graph shown.

Single Pulse Power (100 ohms)  
RPC (Standard Power) tolerances of 0.5% and 1%  
RPC-HP (High Power) all tolerances  
RPC-UP (Ultra High Power) all tolerances



Single Pulse Power (100 ohms)  
RPC (Standard Power)  
Tolerances of 5%, 10% and 20%

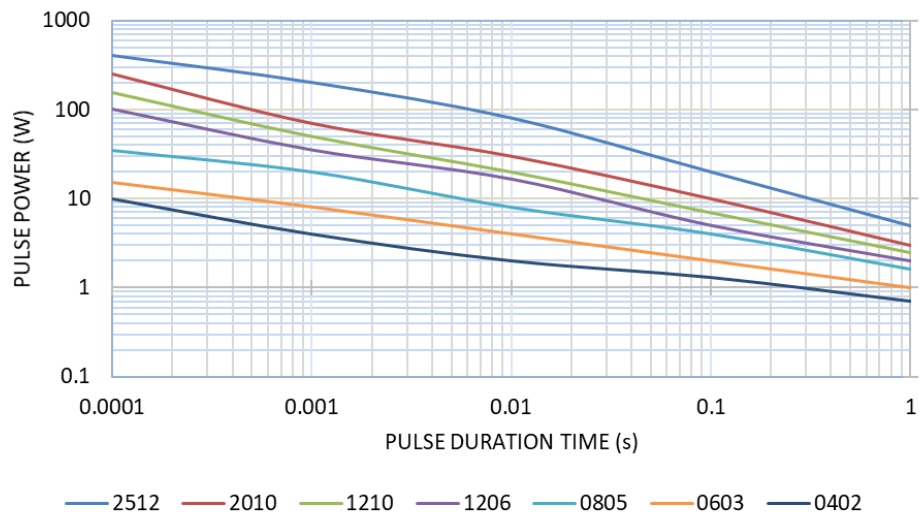


This data is for the 100 Ω resistance value for each size. Pulse power handling is dependent on the resistance value. For resistance values higher or lower than 100 Ω, contact Stackpole for advice on pulse handling characteristics of your particular resistance value of interest.

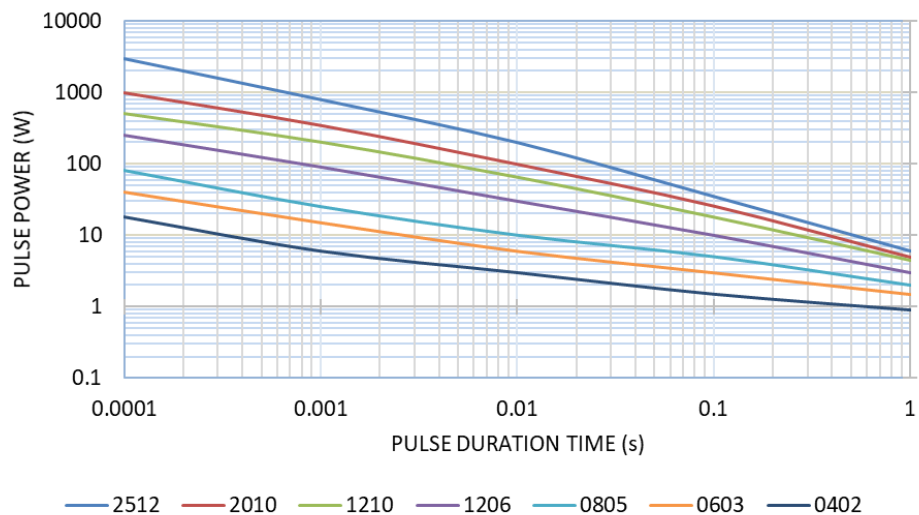
Continuous Pulse

The continuous load graph was obtained by applying repetitive rectangular pulses where the pulse period was adjusted so that the average power dissipated in the resistor was equal to its rated power at 70 °C. Again, the limit of acceptance was a shift in resistance of less than 1% from the initial value.

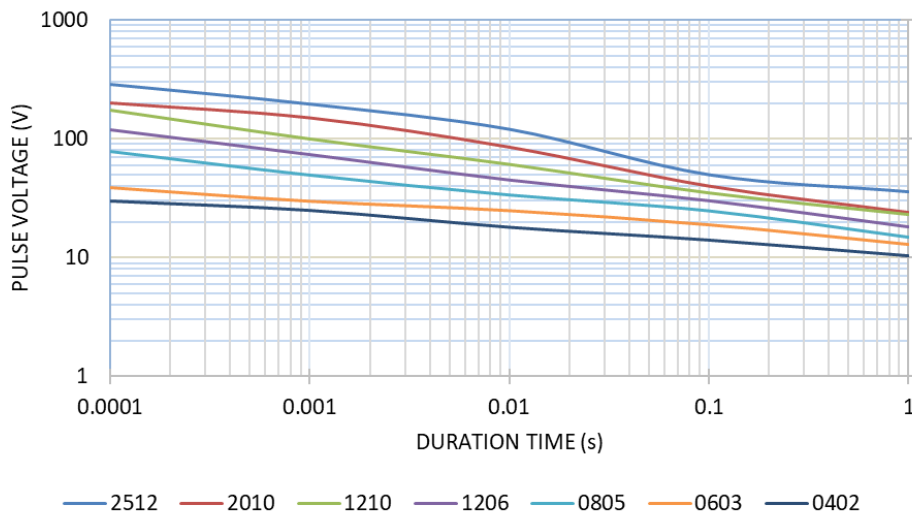
Continuous Pulse Power (100 ohms)  
RPC (Standard Power) tolerances of 0.5% and 1%  
RPC-HP (High Power) all tolerances  
RPC-UP (Ultra High Power) all tolerances



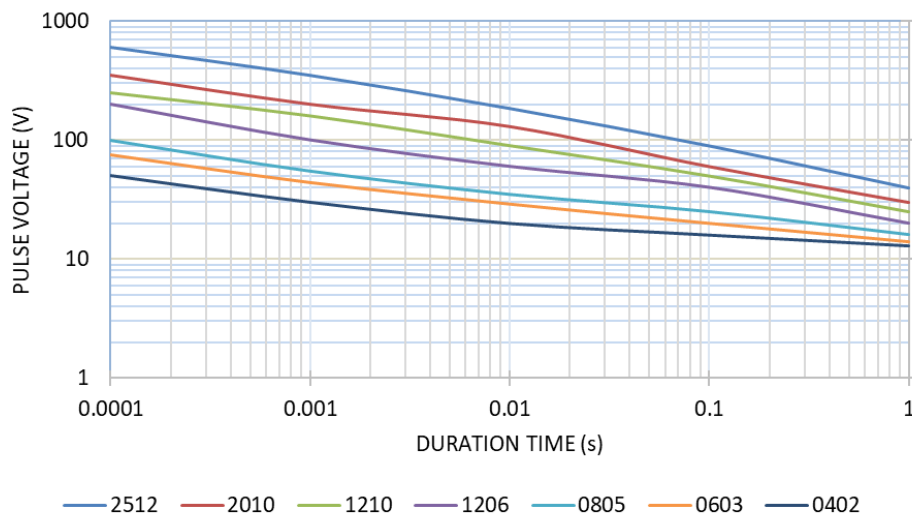
Continuous Pulse Power (100 ohms)  
RPC (Standard Power)  
Tolerances of 5%, 10% and 20%



Pulse Voltage (100 ohms)  
 RPC (Standard Power) tolerances of 0.5% and 1%  
 RPC-HP (High Power) all tolerances  
 RPC-UP (Ultra High Power) all tolerances



Pulse Voltage (100 ohms)  
 RPC (Standard Power)  
 Tolerances of 5%, 10% and 20%



### 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) |
| RPC                     | Pulse Withstanding Thick Film Surface Mount Chip Resistor | SMD                        | YES(1)                         | 100% Matte Sn over Ni             | Jan-03   | 03/01                                 |

Note (1): RoHS Compliant by means of exemption 7c-l.

### “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

|                |                    |              |      |           |        |       |           |                    |      |                  |   |       |          |      |             |
|----------------|--------------------|--------------|------|-----------|--------|-------|-----------|--------------------|------|------------------|---|-------|----------|------|-------------|
| 1              | 2                  | 3            | 4    | 5         | 6      | 7     | 8         | 9                  | 10   | 11               | 12  | 13    | 14       | 15   | 16          |
| R              | P                  | C            | 1    | 2         | 0      | 6     | F         | T                  | 1    | R                | 2   | 0     | -        | H    | P           |
| Product Series |                    | Power Rating |      | Tolerance |        |       | Packaging |                    |      | Resistance Value |   |       | Special  |      |             |
| Code           | Description        | Size         | W    | Code      | Tol    | Value | Code      | Description        | Size | Quantity         | Four characters with the multiplier used as the decimal holder.               |       |          | Code | Description |
| RPC            | Pulse Withstanding | 0402         | 0.2  | D         | 0.5%   | E96   | T         | 7" Reel Paper Tape | 0402 | 10000            | 300 ohm = 300R<br>10.2 Kohm = 10K2<br>1 Mohm = 1M00<br>Zero ohm jumper = 0R00 | blank | Standard |      |             |
|                |                    | 0603         | 0.1  | F         | 1%     | E24   |           |                    | 0603 | 5000             |   |       |          |      |             |
|                |                    | 0603(HP)     | 0.25 | J         | 5%     | E24   | 0805      |                    |      |                  |   |       |          |      |             |
|                |                    | 0805         | 0.25 | K         | 10%    |       | 1206      |                    |      |                  |   |       |          |      |             |
|                |                    | 0805(HP)     | 0.4  | M         | 20%    |       | 1210      |                    |      |                  |   |       |          |      |             |
|                |                    | 0805(UP)     | 0.5  | Z         | Jumper |       | 2010      | 4000               |      |                  |   |       |          |      |             |
|                |                    | 1206         | 0.33 |           |        |       | 2512      |                    |      |                  |   |       |          |      |             |
|                |                    | 1206(HP)     | 0.5  |           |        |       |           |                    |      |                  |   |       |          |      |             |
|                |                    | 1206(UP)     | 0.75 |           |        |       |           |                    |      |                  |   |       |          |      |             |
|                |                    | 1210         | 0.5  |           |        |       |           |                    |      |                  |   |       |          |      |             |
|                |                    | 1210(HP)     | 0.75 |           |        |       |           |                    |      |                  |   |       |          |      |             |
|                |                    | 2010         | 0.75 |           |        |       |           |                    |      |                  |   |       |          |      |             |
|                |                    | 2010(HP)     | 1    |           |        |       |           |                    |      |                  |   |       |          |      |             |
|                |                    | 2512         | 1.5  |           |        |       |           |                    |      |                  |   |       |          |      |             |
|                |                    | 2512(HP)     | 2    |           |        |       |           |                    |      |                  |   |       |          |      |             |

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