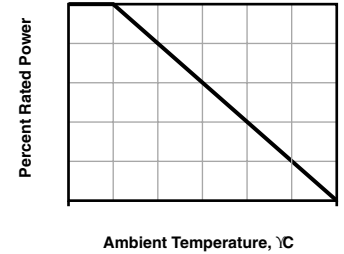




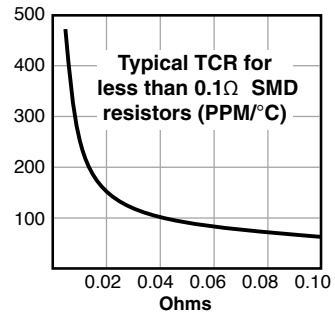
# Surface Mount Power

|              |                           |                 |                 |                       |
|--------------|---------------------------|-----------------|-----------------|-----------------------|
|              | Temp. cycle<br>WR         | Load Life<br>RV | Immersion<br>IR | Momentary<br>Overload |
| Construction | FFOM                      | W               | W               |                       |
| RC           | BBLFRPS                   |                 |                 |                       |
| RF           | WDL0P                     |                 |                 |                       |
| RW           | :LR                       |                 |                 |                       |
| RP           | 3RHOP                     |                 |                 |                       |
| RN           | :LR1RLFVLH                |                 |                 |                       |
| ALL models:  | Leaching ROHPPWRW         |                 | 1RLVBBBL        |                       |
|              | Thermal Shock LWWWBRBSOLH |                 | 1RPADFDBB       |                       |
|              | Flammability              |                 | WHDWL/          |                       |

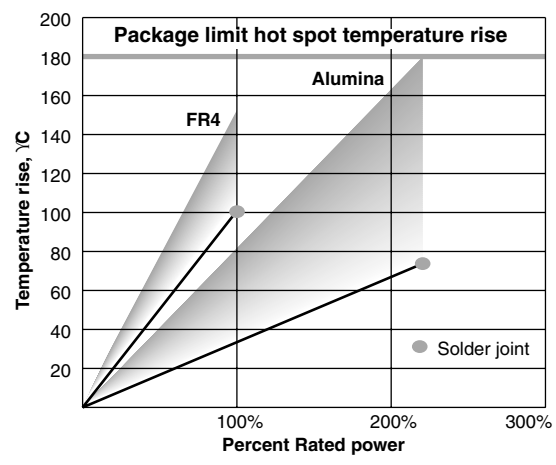
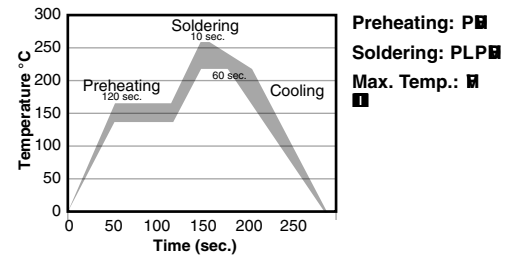
## Derating



## TCR



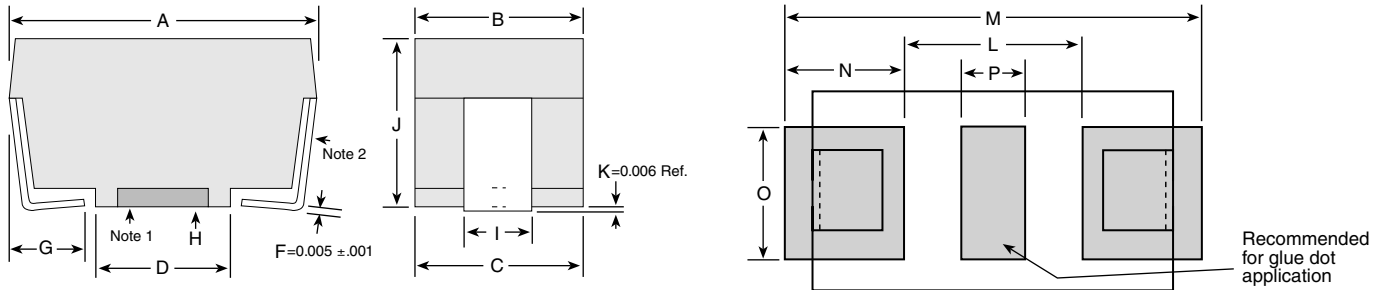
## Recommended Solder Profile



- RC SERIES ONLY
- A. Heat Treatment  
110°C ±10°C  
15 hours
  - B. Frequency of heat treatment  
1 time only
  - C. Cautions  
*Solderability:* may be affected due to oxidization of lead wire  
*Resistance value:* some units may not completely recover to original value.  
*Soldering heat:* some treated product may have substantial resistance change during soldering operation. It is recommended that parts be tested to evaluate soldering heat effects.

# Surface Mount Power

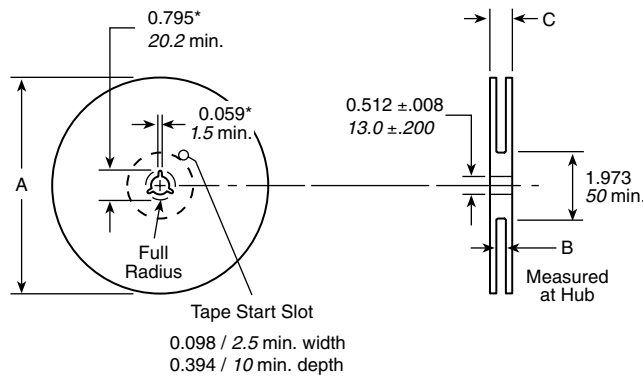
EP



| Packages | Package Outline Dimensions |            |           |             |              | PC Board Land Pattern |            |        |       |       |       |       |
|----------|----------------------------|------------|-----------|-------------|--------------|-----------------------|------------|--------|-------|-------|-------|-------|
|          | A                          | B          | C         | D           | G            | I                     | J          | L      | M     | N     | O     | P     |
| BA (in.) | 0.246±.020                 | 0.136±.005 | 0.133 REF | 0.110±.010  | 0.047 ±0.020 | 0.054±.012            | 0.136±.005 | 0.150  | 0.346 | 0.098 | 0.126 | 0.050 |
| (mm)     | 6.248±.508                 | 3.454±.127 | 3.378 REF | 2.794±.254  | 1.194 ±0.508 | 1.372±.305            | 3.454±.127 | 3.81   | 8.79  | 2.49  | 3.20  | 1.27  |
| CA (in.) | 0.394±.020                 | 0.159±.005 | 0.156 REF | 0.220±.010  | 0.062 Nom.   | 0.064±.012            | 0.159±.005 | 0.256  | 0.524 | 0.134 | 0.126 | 0.060 |
| (mm)     | 10.008±.508                | 4.039±.127 | 3.962 REF | 5.588±.254  | 1.575 Nom.   | 1.626±.305            | 4.038±.127 | 6.50   | 13.31 | 3.40  | 3.20  | 1.52  |
| CB (in.) | 0.407±.020                 | 0.226±.005 | 0.222 REF | 0.260±.010  | 0.062 Nom.   | 0.084±.012            | 0.222±.005 | 0.276  | 0.537 | 0.131 | 0.126 | 0.093 |
| (mm)     | 10.338±.508                | 5.74±.127  | 5.639 REF | 6.604±.254  | 1.575 Nom.   | 2.134±.305            | 5.639±.127 | 7.01   | 13.64 | 3.33  | 3.20  | 2.36  |
| DA (in.) | 0.455±.020                 | 0.240±.005 | 0.236 REF | 0.260±.010  | 0.062 Nom.   | 0.115±.012            | 0.226±.005 | 0.317  | 0.585 | 0.134 | 0.155 | 0.093 |
| (mm)     | 11.557±.508                | 6.096±.127 | 5.994 REF | 6.604±.254  | 1.575 Nom.   | 2.921±.305            | 5.740±.127 | 8.05   | 14.86 | 3.40  | 3.94  | 2.36  |
| DB (in.) | 0.625±.020                 | 0.273±.005 | 0.268 REF | 0.417±.010  | 0.062 Nom.   | 0.115±.012            | 0.226±.005 | 0.474  | 0.742 | 0.134 | 0.155 | 0.093 |
| (mm)     | 15.875±.508                | 6.934±.127 | 6.807 REF | 10.592±.254 | 1.575 Nom.   | 2.921±.305            | 5.740±.127 | 12.040 | 18.85 | 3.40  | 3.94  | 2.36  |
| EA (in.) | 0.811±.020                 | 0.273±.005 | 0.268 REF | 0.572±.010  | 0.093 Nom.   | 0.115±.012            | 0.273±.005 | 0.611  | 1.000 | 0.195 | 0.155 | 0.093 |
| (mm)     | 20.599±.508                | 6.934±.127 | 6.807 REF | 14.529±.254 | 2.362 Nom.   | 2.921±.305            | 6.934±.127 | 15.52  | 25.4  | 4.95  | 3.94  | 2.36  |
| BB (in.) | 0.202±.010                 | 0.10±.010  | 0.095 REF | 0.079±.010  | 0.050 Nom.   | 0.065±.012            | 0.135±.005 | 0.078  | 0.328 | 0.125 | 0.126 | 0.026 |
| (mm)     | 5.140±.508                 | 2.54±.127  | 2.41 REF  | 2.00±.254   | 1.280 Nom.   | 1.640±.305            | 3.420±.127 | 1.98   | 8.33  | 3.18  | 3.20  | 0.66  |

**Note 1:** Packages BA and CA are only available with a pedestal base. Packages CB and DA are available in either pedestal or recessed base. Packages DB and EA are only available in a recessed base.  
**Note 2:** Test point is .020 above PCB.  
**Note 3:** Tape and reel dimensions per EIA 481 A except "EA" size which is 12 mm component pitch versus 16mm pitch.  
 Land pattern dimensions are for reference only

## Reel Dimensions

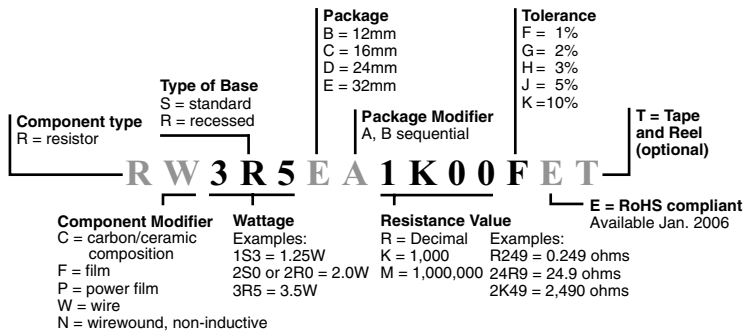


| Size | A nom. | B                    | C max. | Quantity           |
|------|--------|----------------------|--------|--------------------|
| 12mm | 13"    | 0.488" +0.078, -0.00 | 0.724" | 2000 pcs. BA or    |
|      |        | 12.4mm +2.0, -0.0    | 18.4mm | 2500 pcs. BB       |
| 16mm | 13"    | 0.646" +0.078, -0.00 | 0.882" | 1500 pcs. CA or    |
|      |        | 16.4mm +2.0, -0.0    | 22.4mm | 1000 pcs. CB       |
| 24mm | 13"    | 0.961" +0.078, -0.00 | 1.196" | 1000 pcs. DA or DB |
|      |        | 24.4mm +2.0, -0.0    | 30.4mm |                    |
| 32mm | 13"    | 1.276" +0.078, -0.00 | 1.52"  | 750 pcs. EA        |
|      |        | 32.4mm +2.0, -0.0    | 38.4mm |                    |

00BH000FRPSDWLEOHZWKPDMSLFNDQGSODFHDPDFKLOHV  
 DQGPDGHLQDFFRQDQFHZWK00FHSW00H  
 KLFLKLPFRPSRQHQWLSLWFKYH00PSLWFK

(continued)

# Surface Mount Power



## Standard Part Numbers for Surface Mount Power Resistors

|                            |          | Wirewound                               |         |         |         |         |         |         |         |         |         |
|----------------------------|----------|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Package style              |          | BA                                      | CA      | CB      | CB      | DA      | DA      | DB      | EA      | BB      | EA      |
| Base: standard or recessed |          | S                                       | S       | S       | R       | S       | R       | R       | R       | S       | R       |
| Wattage                    |          | 1.0                                     | 1.5     | 2.0     | 2.0     | 2.0     | 2.0     | 3.0     | 3.5     | 0.6     | 1.0     |
| Ohmic value                | Part No. | RW1S0BA                                 | RW1S5CA | RW2S0CB | RW2R0CB | RW2S0DA | RW2R0DA | RW3R0DB | RW3R5EA | RW0S6BB | RC1R0EA |
|                            | Prefix   |   |         |         |         |         |         |         |         |         |         |
| Suffix                     |          | Tolerance suffix: F = 1% J = 5% K = 10% |         |         |         |         |         |         |         |         |         |
| 0.005                      | R005     |   | J       | J       |         | F/J     |         |         |         |         |         |
| 0.010                      | R010     | F/J                                     | J       |         | J       | F       | J       | J       | J       | F       |         |
| 0.015                      | R015     | F/J                                     | J       |         |         |         |         |         |         | F       |         |
| 0.020                      | R020     | J                                       |         | J       |         | F       | J       |         | J       | F       |         |
| 0.025                      | R025     | J                                       |         |         |         |         |         |         |         |         |         |
| 0.027                      | R027     | J                                       |         |         |         |         |         |         |         |         |         |
| 0.030                      | R030     | F                                       | J       | J       |         |         |         |         | J       | F       |         |
| 0.033                      | R033     | J                                       |         |         |         |         |         |         |         |         |         |
| 0.036                      | R036     | J                                       |         |         |         |         |         |         |         |         |         |
| 0.050                      | R050     | F/J                                     |         | J       |         | J       | F       | J       | J       | F       |         |
| 0.056                      | R056     | J                                       |         |         |         |         |         |         |         |         |         |
| 0.075                      | R075     | J                                       |         |         |         |         |         |         |         | F       |         |
| 0.080                      | R080     |   | J       |         |         |         |         |         | J       |         |         |
| 0.100                      | R100     | F/J                                     | J       |         | J       | F       | J       | J       | J       | F       |         |
| 0.150                      | R150     |   | J       |         | J       | J       |         |         |         |         |         |
| 0.200                      | R200     |   | J       | J       |         |         |         |         | J       |         |         |
| 0.220                      | R220     |   |         | J       |         |         |         |         |         |         |         |
| 0.240                      | R240     | J                                       |         | J       |         |         |         |         |         | F       |         |
| 0.300                      | R300     | J                                       |         |         | J       |         |         |         |         |         |         |
| 0.330                      | R330     |   |         |         | J       |         |         |         |         |         |         |
| 0.400                      | R040     |   | J       |         |         |         |         |         |         |         |         |
| 0.400                      | R400     |   |         |         | J       |         |         |         |         |         |         |
| 0.470                      | R470     | J                                       |         | J       |         |         | J       |         |         | F       |         |
| 0.500                      | R500     | J                                       | J       |         |         | J       |         |         | J       |         |         |
| 0.750                      | R750     | J                                       |         |         |         |         |         |         |         | F       |         |
| 1.00                       | 1R00     | F/J                                     | J       | J       |         |         | J       | J       |         | F       |         |
| 2.00                       | 2R00     |   |         |         |         |         |         |         |         | F       |         |

|                            |          | Wirewound                               |         |         |         |         |         |         |         |         |         |
|----------------------------|----------|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Package style              |          | BA                                      | CA      | CB      | CB      | DA      | DA      | DB      | EA      | BB      | EA      |
| Base: standard or recessed |          | S                                       | S       | S       | R       | S       | R       | R       | R       | S       | R       |
| Wattage                    |          | 1.0                                     | 1.5     | 2.0     | 2.0     | 2.0     | 2.0     | 3.0     | 3.5     | 0.6     | 1.0     |
| Ohmic value                | Part No. | RW1S0BA                                 | RW1S5CA | RW2S0CB | RW2R0CB | RW2S0DA | RW2R0DA | RW3R0DB | RW3R5EA | RW0S6BB | RC1R0EA |
|                            | Prefix   |   |         |         |         |         |         |         |         |         |         |
| Suffix                     |          | Tolerance suffix: F = 1% J = 5% K = 10% |         |         |         |         |         |         |         |         |         |
| 3.30                       | 3R30     |   |         |         |         |         |         |         |         |         | K       |
| 4.70                       | 4R70     |   |         |         |         |         |         |         |         |         | K       |
| 5.00                       | 5R00     |   |         |         |         |         |         |         |         | F       |         |
| 5.60                       | 5R60     | J                                       |         |         |         |         |         |         |         |         |         |
| 6.80                       | 6R80     |   |         |         |         |         |         |         |         |         | K       |
| 7.50                       | 7R50     |   |         |         |         |         |         |         | J       | F       |         |
| 10.00                      | 10R0     | J                                       |         | J       |         |         | J       |         |         | F       | K       |
| 15.00                      | 15R0     | J                                       | J       |         |         |         |         |         |         | F       | K       |
| 20.00                      | 20R0     |   |         | J       |         |         |         |         |         |         |         |
| 22.00                      | 22R0     |   |         |         |         |         |         |         |         |         | K       |
| 24.90                      | 24R9     |   |         |         |         |         |         |         |         | F       |         |
| 33.00                      | 33R0     |   |         |         |         |         |         |         |         | F       | K       |
| 36.00                      | 36R0     |   |         |         |         |         |         |         |         | F       |         |
| 47.00                      | 47R0     | J                                       |         |         |         |         |         |         | J       | F       | K       |
| 50.00                      | 50R0     |   |         |         |         |         |         |         |         |         |         |
| 51.00                      | 51R0     | J                                       |         |         |         |         |         |         |         |         |         |
| 68.00                      | 68R0     |   |         |         |         |         |         |         |         |         | K       |
| 82.00                      | 82R0     |   |         |         | J       |         |         |         |         |         |         |
| 100.00                     | 100R     |   |         | J       |         |         |         |         |         | F       | K       |
| 120.00                     | 120R     |   | J       |         |         |         |         |         |         |         |         |
| 180.00                     | 180R     | J                                       |         |         |         |         |         |         |         |         |         |
| 300.00                     | 300R     | J                                       |         |         |         |         |         |         |         |         |         |
| 470.00                     | 470R     |   |         |         |         |         | J       |         |         |         |         |
| 1K                         | 1K00     |   |         |         |         |         |         |         | J       |         | K       |
| 4.7K                       | 4K70     |   |         |         | J       |         |         |         |         |         |         |
| 5K                         | 5K00     |   |         |         |         |         |         |         |         | J       |         |