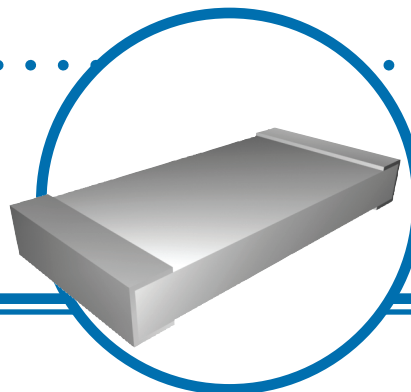


# Precision Military and Space Qualified Chip Resistors



## MIL-CHIP Series

- Now qualified to MIL-PRF-55342 Space Level T
- Seven industry standard sizes available
- MIL-PRF-55342 Characteristics E, H, K, and M
- MIL-PRF-55342 extended reliability levels C, M, P, R, S and T



## Electrical Data

| Style Size         | Technology           | MIL-PRF-55342 Characteristic | Tolerance           | Resistance Range (Ω) | Rated Power (mW) | Rated Voltage* (V) | Reliability Level | Termination Type                                 |
|--------------------|----------------------|------------------------------|---------------------|----------------------|------------------|--------------------|-------------------|--------------------------------------------------|
| Style 11<br>RM0402 | Thin Film (TaNFilm®) | E, H, K, M                   | ±0.1%               | 100R - 30.0K         | 50               | 30                 | C, M, P, R, S     | Type `B`<br><br>Sn/Pb solder over nickel barrier |
|                    |                      |                              | ±1%, ±2%, ±5%, ±10% | 10R0 - 30.0K         |                  |                    |                   |                                                  |
| Style 12<br>RM0603 | Thin Film (TaNFilm®) | E, H, K, M                   | ±0.1%               | 100R - 59K           | 100              | 50                 | C, M, P, R, S, T  |                                                  |
|                    |                      |                              | ±1%, ±2%, ±5%, ±10% | 10R0- 59K            |                  |                    |                   |                                                  |
| Style 06<br>RM0705 | Thin Film (TaNFilm®) | E, H, K, M                   | ±0.1%               | 100R - 125K          | 150              | 50                 | C, M, P, R, S, T  |                                                  |
|                    |                      |                              | ±1%, ±2%, ±5%, ±10% | 10R0- 125K           |                  |                    |                   |                                                  |
| Style 04<br>RM1505 | Thin Film (TaNFilm®) | E, H, K, M                   | ±0.1%               | 100R - 125K          | 150              | 125                | C, M, P, R, S, T  |                                                  |
|                    |                      |                              | ±1%, ±2%, ±5%, ±10% | 10R0- 125K           |                  |                    |                   |                                                  |
| Style 07<br>RM1206 | Thin Film (TaNFilm®) | E, H, K, M                   | ±0.1%               | 100R - 125K          | 250              | 100                | C, M, P, R, S, T  |                                                  |
|                    |                      |                              | ±1%, ±2%, ±5%, ±10% | 10R0- 125K           |                  |                    |                   |                                                  |
| Style 07<br>RM1206 | Thick Film           | K, M                         | ±1%, ±2%, ±5%, ±10% | 1R00 - 10M           | 250              | 100                | C, M, P, R, T     |                                                  |
| Style 08<br>RM2010 | Thick Film           | K, M                         | ±1%, ±2%, ±5%, ±10% | 1R00 - 15M           | 800              | 150                |                   |                                                  |
| Style 09<br>RM2512 | Thick Film           | K, M                         | ±1%, ±2%, ±5%, ±10% | 1R0 - 15M            | 1000             | 200                |                   |                                                  |

\*Note: Voltage shall not exceed  $\sqrt{P \times R}$ .

### General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

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# Precision Military Qualified Chip Resistors



## Environmental Data

| Environmental Test<br>MIL-PRF-55342 | Thick Film Performance            |                        | Thin Film Performance             |                        |
|-------------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------|
|                                     | MIL-PRF-55342<br>Characteristic K | Typical IRC $\Delta R$ | MIL-PRF-55342<br>Characteristic H | Typical IRC $\Delta R$ |
| Thermal Shock                       | $\pm 0.5\%$                       | $\pm 0.04\%$           | $\pm 0.25\%$                      | $\pm 0.02\%$           |
| Low Temperature Operation           | $\pm 0.25\%$                      | $\pm 0.01\%$           | $\pm 0.25\%$                      | $\pm 0.01\%$           |
| Short-time Overload                 | $\pm 0.25\%$                      | $\pm 0.03\%$           | $\pm 0.10\%$                      | $\pm 0.01\%$           |
| High Temperature Exposure           | $\pm 0.5\%$                       | $\pm 0.05\%$           | $\pm 0.50\%$                      | $\pm 0.03\%$           |
| Resistance to Solder                | $\pm 0.25\%$                      | $\pm 0.09\%$           | $\pm 0.25\%$                      | $\pm 0.01\%$           |
| Moisture Resistance                 | $\pm 0.5\%$                       | $\pm 0.06\%$           | $\pm 0.40\%$                      | $\pm 0.03\%$           |
| Life                                | $\pm 2.0\%$                       | $\pm 0.10\%$           | $\pm 2.0\%$                       | $\pm 0.03\%$           |

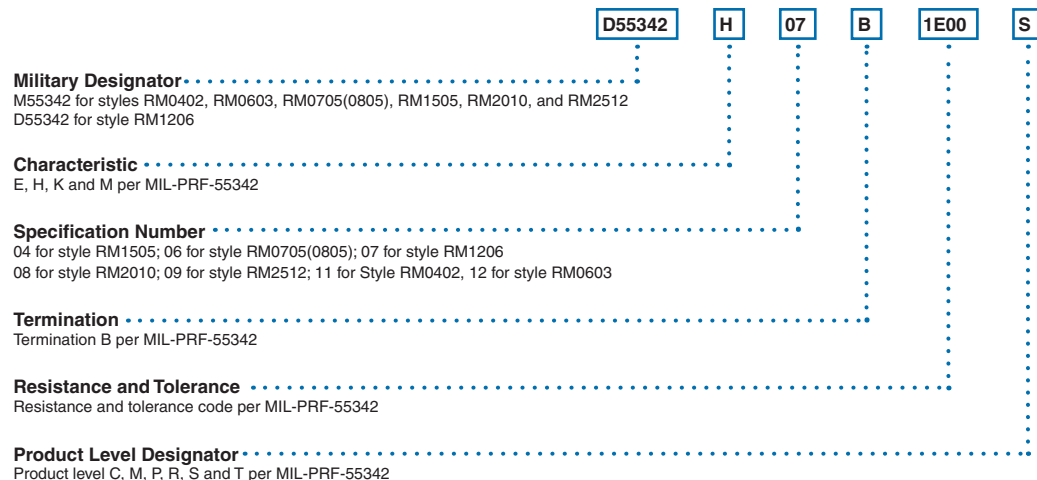
## Physical Data

|                   | L                  | W                  | H                  | a                      | b                      |
|-------------------|--------------------|--------------------|--------------------|------------------------|------------------------|
| 0402              | 0.040" $\pm 0.002$ | 0.021" $\pm 0.002$ | 0.012" $\pm 0.003$ | 0.008" $\pm 0.002$     | 0.010" $\pm 0.002$     |
| 0603              | 0.063" $\pm 0.004$ | 0.031" $\pm 0.004$ | 0.020" $\pm 0.004$ | 0.008" $\pm 0.004$     | 0.008" $\pm 0.004$     |
| 0805              | 0.081" $\pm 0.005$ | 0.050" $\pm 0.005$ | 0.020" $\pm 0.006$ | 0.016" $\pm 0.008$     | 0.016" $\pm 0.008$     |
| 1505              | 0.155" $\pm 0.007$ | 0.050" $\pm 0.005$ | 0.025" $\pm 0.003$ | 0.015" $\pm 0.008$     | 0.015" $\pm 0.008$     |
| 1206 (Thin Film)  | 0.126" $\pm 0.006$ | 0.063" $\pm 0.005$ | 0.024" $\pm 0.004$ | 0.016" $\pm 0.008$     | 0.016" $\pm 0.008$     |
| 1206 (Thick Film) | 0.126" $\pm 0.008$ | 0.063" $\pm 0.005$ | 0.024" $\pm 0.004$ | 0.020" $+0.005/-0.010$ | 0.020" $+0.005/-0.010$ |
| 2010              | 0.209" $\pm 0.009$ | 0.098" $\pm 0.005$ | 0.028" $\pm 0.005$ | 0.020" $\pm 0.005$     | 0.020" $\pm 0.005$     |
| 2512              | 0.259" $\pm 0.009$ | 0.124" $\pm 0.005$ | 0.028" $\pm 0.005$ | 0.020" $\pm 0.005$     | 0.020" $\pm 0.005$     |

# Precision Military Qualified Chip Resistors



## Ordering Data For Performance Specification MIL-PRF-55342



### Packaging

Standard order packaging is 8mm or 12mm tape per EIA 481. Conductive waffle pack packaging is also available.

For additional information or to discuss your specific requirements,  
please contact our Applications team using the contact details below.