Precision Military and Space Qualified Chip Resistors



MIL-CHIP Series

Features

- Now qualified to MIL-PRF-55342 Space Level T
- Four 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



MIL-PRF-55342 Qualified Product Listing (QPL)

| Style Size | Technology | MIL-PRF-55342 Characteristic | Tolerance | Resistance Range (Ω) | Rated Voltage* (V) | Rated Power (mW) | Reliability Level | Termination Type |
|--------------------|---------------------------------------|---------------------------------|----------------|----------------------------|--------------------------|------------------------|----------------------|-----------------------------|
| | Thin Film PFC Series (TaNFilm®) | Е, Н, К, М | ±0.1% | 100R - 30K | | 50 | C, M, P, R, S | |
| Style 11 | | | ±1% | 49R9 - 29K | 30 | | | |
| RM0402 | | | ±2%, ±5% | 51R0 - 30K | 30 | | | |
| | | | ±10% | 51R0 - 27K | | | | |
| Style 12 | Thin Film PFC Series (TaNFilm®) | E, H, K, M | ±0.1%, ±1% | 10R0 - 59K | 50 | 100 | C, M, P, R, S, T | |
| RM0603 | | | ±2%, ±5%, ±10% | 10R0- 56K | 50 | | | |
| | Thin Film PFC Series (TaNFilm®) | Е, Н, К, М | ±0.1% | 10R0 - 125K | | 150 | C, M, P, R, S, T | Type `B′ |
| Style 06 RM0705 | | | ±1% | 10R0- 124K | 50 | | | Sn/Pb solder over nickel |
| | (1.1.1.1.1.1.) | | ±2%, ±5%, ±10% | 10R0- 120K | | | | barrier |
| | | es E, H, K, M | ±0.1% | 100R - 500K | | 250 | C, M, P, R, S, T | |
| Style 07 RM1206 | Thin Film PFC Series (TaNFilm®) | | ±1% | 10R0- 499K | 100 | | | |
| | | | ±2%, ±5%, ±10% | 10R0- 470K | | | | |

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

General Note

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Physical Data

| ← | L | | → a ← | | | | |
|----------|---------------|---------------|---------------|---------------|---------------|--|--|
| | ТОР | ₩ ВОТ | ГОМ | SIDE | ⊢ н ➡ | | |
| | L | W | н | → b ← a | b | | |
| 0402 | 0.040" ±0.002 | 0.021" ±0.002 | 0.012" ±0.003 | 0.008" ±0.002 | 0.010" ±0.002 | | |
| 0603 | 0.063" ±0.004 | 0.031″ ±0.004 | 0.020" ±0.004 | 0.012" ±0.005 | 0.015" ±0.005 | | |
| 0805 | 0.081″ ±0.005 | 0.050" ±0.005 | 0.020" ±0.006 | 0.016" ±0.008 | 0.016" ±0.008 | | |
| 1206 | 0.126" ±0.006 | 0.063" ±0.005 | 0.024" ±0.004 | 0.016" ±0.008 | 0.016" ±0.008 | | |

Environmental Data

| Environmental Test | Thin Film Performance | | | | | | | | |
|---------------------------|-----------------------------------|----------------|--|--|--|--|--|--|--|
| MIL-PRF-55342 | MIL-PRF-55342 Characteristic H | Typical IRC ∆R | | | | | | | |
| Thermal Shock | ±0.25% | ±0.02% | | | | | | | |
| Low Temperature Operation | ±0.25% | ±0.01% | | | | | | | |
| Short-time Overload | ±0.10% | ±0.01% | | | | | | | |
| High Temperature Exposure | ±0.50% | ±0.03% | | | | | | | |
| Resistance to Solder | ±0.25% | ±0.01% | | | | | | | |
| Moisture Resistance | ±0.40% | ±0.03% | | | | | | | |
| Life | ±2.0% | ±0.03% | | | | | | | |

Packaging

Standard packing for all styles is tape and reel in a quantity of 500 pieces. Optionally the reel quantity may be 1000 pieces, and product level T (space) has an additional option of 300 pieces per reel.

A service of packing to waffle trays of 100 pieces is available for styles 12, 06 and 07.

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Т

Space level

MIL-CHIP Series

Ordering Procedure

Example: D55342H07B1E00S (Style RM1206, ±50ppm/°C, specification number 07, SnPb termination, 1kΩ, ±1%, failure rate 0.001%/1000 hours)

| D 5 5 3 4 2 | Н | 0 | 7 | В | 1 | Ε | 0 | 0 | S |
|-------------|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 3 | 4 | | | 5 | | 6 |

| 1 Military Designator | | 2 Characteristic | | 3 Specification | | 4 Termination | | 5 Value & Tolerance | | 6 Product Level | |
|-----------------------------|-------|---------------------|------------|--------------------|------|------------------|------|------------------------|---|--------------------|--|
| | 0402, | Е | 25ppm/°C | 11 | 0402 | В | SnPb | 4 character code. | С | Non-ER | |
| M55342 | 0603, | Н | 50 ppm/°C | 12 | 0603 | | | Letter code marks | М | 1%/1000hrs | |
| | 0805 | К | 100 ppm/°C | 06 | 0805 | | | decimal position and | Р | 0.1%/1000hrs | |
| D55342 | 1206 | Μ | 300 ppm/°C | 07 | 1206 | | | indicates multiplier | R | 0.01%/1000hrs | |
| | | | | | | • | | and tolerance - see | S | 0.001%/1000hrs | |
| | | | | | | | | table below. | т | Snace level | |

| Value | & | Multiplier | | | | | | | |
|-----------|------|------------|--------|-----------|--|--|--|--|--|
| Tolerance | Code | x1 | x 1000 | x1000,000 | | | | | |
| | 0.1% | А | В | С | | | | | |
| | 1% | D | E | F | | | | | |
| Tolerance | 2% | G | Н | Т | | | | | |
| | 5% | J | К | L | | | | | |
| | 10% | М | N | Р | | | | | |

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