

VISHAY 55342 UPGRADE GUIDE

How to upgrade Vishay MIL-Chips Resistors

Example Part Number : M55342K02B10E0PWB



The DNA of tech.

M55342

*MIL style D55342
ONLY applies to style 07
(RM1206); M55342 applies
to the other styles except 07.

| K | 02 | B | 10E0 | P | WB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|------------------------|---|---|---|----------------------|------|------|------|---|---|---|-------|---|---|---|------|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|-----|---|---|---|-----------------|--|
| Characteristics | Spec / Sheet Case Size | Termination Style | Value and Tolerance Multiplier | Failure Rate | Vishay Package Codes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E = 25 ppm (Thin Film) | 01 = 0502 | B = Pre-tinned nickel barrier, wraparound | <div>↓</div> <table><tr><th>Tolerance</th><th>1 Ω</th><th>1 kΩ</th><th>1 MΩ</th></tr><tr><td>0.1%</td><td>A</td><td>B</td><td>C</td></tr><tr><td>0.25%</td><td>R</td><td>U</td><td>V</td></tr><tr><td>0.5%</td><td>W</td><td>Y</td><td>Z</td></tr><tr><td>1%</td><td>D</td><td>E</td><td>F</td></tr><tr><td>2%</td><td>G</td><td>H</td><td>T</td></tr><tr><td>5%</td><td>J</td><td>K</td><td>L</td></tr><tr><td>10%</td><td>M</td><td>N</td><td>P</td></tr></table> | Tolerance | 1 Ω | 1 kΩ | 1 MΩ | 0.1% | A | B | C | 0.25% | R | U | V | 0.5% | W | Y | Z | 1% | D | E | F | 2% | G | H | T | 5% | J | K | L | 10% | M | N | P | T = Space Level | *See the Vishay Package Code Chart below |
| Tolerance | 1 Ω | | | 1 kΩ | 1 MΩ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.1% | A | B | | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.25% | R | U | | V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.5% | W | Y | | Z | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1% | D | E | | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2% | G | H | | T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5% | J | K | | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10% | M | N | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H = 50 ppm (Thin Film) | 02 = 0505 | S = 0.001 % / 1000 h | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K = 100 ppm | 03 = 0603 | R = 0.01 % / 1000 h | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L = 200 ppm | 04 = 1505 | P = 0.1 % / 1000 h | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M = 300 ppm | 05 = 2208 | M = 1.0 % / 1000 h | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 06 = 0705 | C = Non-Established Reliability | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 07 = 1206 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 08 = 2010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 09 = 2512 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 = 1010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 = 0402 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 = 0603 | | | *Failure rate U and V require Group A and B testing data. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*The lower ppm the 'better than' part. You can always use a lower ppm as the 'better than' part.

WB

Vishay Package Code for Thin and Thick Film M55342

Thick Film 55342

S6 = tin / lead, T/R (300 pieces)
S2 = tin / lead, T/R (500 pieces)
S3 = tin / lead, T/R (1000 pieces)
TP = tin / lead, T/R (Full Reel)
TN = tin / lead, T/R (Full Reel, w/ESD)
UL = tin / lead, T/R (single lot date code)
SV = tin / lead, T/R (1000 pcs, w/ESD)
SU = tin / lead, T/R (500 pcs, w/ESD)
ST = tin / lead, T/R (300 pcs, w/ESD)

Thick Film 55342

ST = tin / lead, T/R (300 pcs, w/ESD)
WB = tin / lead, waffle tray
WA = tin / lead, waffle tray, w/ESD
WL = tin / lead, waffle tray (single lot)
BS-Bulk Thin Film Only
WS-Waffle Pack 25 pcs min Thin Film Only
WO-Waffle Pack 100 pc min Thin Film Only

Thin Film 55342

BS = Bulk Thin Film Only
WS = Waffle Pack (25 pcs min, Thin Film Only)
WO = Waffle Pack (100 pcs min)
WI = 25 min (item single lot date code)
WP = 25 min (package unit single lot date code)

Thin Film Tape and Reel

T0 - 100 pcs reel
T3 - 300 pcs reel
T5 - 500 pcs reel
T1 - 1000 pcs reel
TF- = full reel (2K, 4K, or 5K dependent on case size) per tape and reel document 60034
TS = 25 min. Special Packaging:
TI = 25 min (item single lot date code)
TP = 25 min. (package unit single lot date code)

Established Reliability Resistors, Failure Rate

The probability of failure per unit of time of items in operation.
Sometimes estimated as a ratio of the number of failures to the accumulated operating time for the items.



| Failure Rate Level | Failure Rate | Failure Rate | Failure Rate |
|----------------------|-----------------------------|--------------|---------------|
| Designation / Symbol | (Percent / 1,000 hrs) | | Substitution |
| T | Space Level | T (Space) | - |
| S | 0.001 | S (0.001) | T |
| R | 0.01 | R (0.1) | T, S |
| P | 0.1 | P (0.1) | T, S, R |
| M | 1 | M (1.0) | T, S, R, P |
| C | Non-Established Reliability | C (Non-ER) | T, S, R, P, M |