



QPL MIL-PRF-55342 Qualified Thin Film Resistor, Surface-Mount Chip



LINKS TO ADDITIONAL RESOURCES



Thin Film MIL-PRF-55342 established reliability "T" level chip resistors feature a thin film resistor element and with all sputtered wraparound terminations that provide excellent adhesion and dimensional uniformity. They are ideal in applications requiring stringent performance requirements. Established reliability is assured through 100 % screening and extensive environmental testing for every lot that includes complete 100 % group A, power conditioning and group B lot testing performed for T-level product assurance.

FEATURES

- T-level (space) qualified
• Passes outgassing requirements of ASTM-E595
• TCR to ± 25 ppm/°C
• Tolerances to ± 0.1 %
• 100 % power conditioning

TYPICAL PERFORMANCE

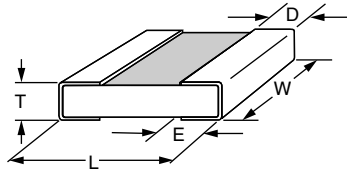
Table with 2 columns: Parameter (TCR, TOL.) and Absolute Value (25, 0.1)

STANDARD ELECTRICAL SPECIFICATIONS table with columns: TEST, SPECIFICATIONS, CONDITIONS

COMPONENT RATINGS table with columns: CASE SIZE, MAX. WORKING VOLTAGE (V), POWER RATING (mW), RESISTANCE RANGE (Ω) BY CHARACTERISTICS TOLERANCE



DIMENSIONS in inches



CASE SIZE	TERM.	L	W	T	D	E
M55342X01	B	0.055 ± 0.006	0.025 ± 0.005	0.010 to 0.033	0.010	0.015
M55342X02	B	0.055 ± 0.006	0.050 ± 0.005	0.010 to 0.033	0.010	0.015
M55342X03	B	0.105 ± 0.007	0.050 ± 0.005	0.010 to 0.033	0.015	0.015
M55342X04	B	0.155 ± 0.007	0.050 ± 0.005	0.015 to 0.033	0.015	0.015
M55342X05	B	0.230 ± 0.007	0.075 ± 0.005	0.010 to 0.033	0.020	0.020
M55342X06	B	0.080 ± 0.006	0.050 ± 0.005	0.010 to 0.033	0.016 ± 0.008	0.015
D55342X07	B	0.126 ± 0.008	0.063 ± 0.005	0.010 to 0.033	0.020 + 0.005 / - 0.010	
M55342X08	B	0.209 ± 0.009	0.098 ± 0.005	0.010 to 0.033	0.020	0.020
M55342X09	B	0.259 + 0.009 / - 0.015	0.124 ± 0.005	0.010 to 0.033	0.020	0.020
M55342X10	B	0.105 ± 0.007	0.100 ± 0.005	0.010 to 0.033	0.015	0.015
M55342X11	B	0.042 ± 0.008	0.022 ± 0.005	0.010 to 0.033	0.010	0.010
M55342X12	B	0.064 ± 0.006	0.032 ± 0.005	0.010 to 0.033	0.012	0.015

ENVIRONMENTAL TESTS

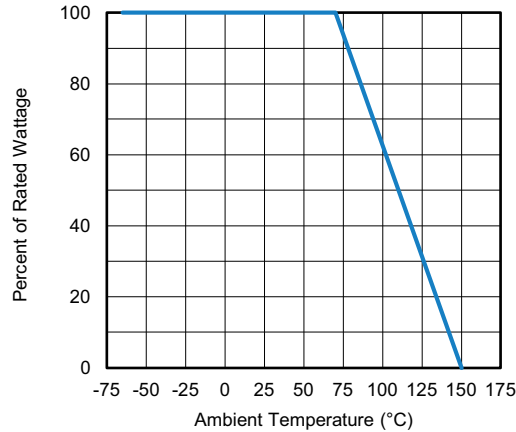
ENVIRONMENTAL TEST	MIL-PRF-55342 LIMITS (ΔR ±)	VISHAY PERFORMANCE (ΔR ±)
Thermal Shock	0.10 %	0.02 %
Low Temperature Operation	0.10 %	0.03 %
Short Time Overload	0.10 %	0.05 %
High Temperature Exposure	0.10 %	0.01 %
Resistance to Bonding	0.20 %	0.01 %
Moisture Resistance	0.20 %	0.04 %
TCR	± 25 ppm/°C	< 15 ppm/°C
Life (2000 h at + 70 °C)	0.05 %	0.02 %
Life (10 000 h at + 70 °C)	2.00 %	0.04 %

MECHANICAL SPECIFICATIONS

Resistive Element	Tamelox
Substrate Material	Alumina
Chip Terminations	Solder over nickel
Fused Solder	Tin / lead solder alloy



DERATING



GLOBAL PART NUMBER INFORMATION

Global Part Numbering: M55342E06B1C00TTSV

M 5 5 3 4 2 E 0 7 B 1 C 0 0 T T S V

MODEL	TCR CHARACTERISTIC	CASE SIZE	TERMINATION	OHMIC VALUE	PRODUCT LEVEL DESIGNATOR	PACKAGING	VENDOR
M55342 or D55342 (/07 size only)	E = 25 ppm/°C H = 50 ppm/°C K = 100 ppm/°C ⁽¹⁾ L = 200 ppm/°C M = 300 ppm/°C ⁽¹⁾	01 = 0502 02 = 0505 03 = 1005 04 = 1505 05 = 2208 06 = 0705 07 = 1206 08 = 2010 09 = 2512 10 = 1010 11 = 0402 12 = 0603	B = solderable	Three digits and a letter. Letter identifies tolerance, acts as multiplier and decimal locator. MULTIPLIER 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	BS = BULK 1 min., 1 mult. WAFFLE PACK WS = WAFFLE 25 min., 1 mult. WI = 25 min., 1 mult. (item single lot date code) WP = 25 min., 1 mult. (package unit single lot date code) WO = 100 min., 100 mult. TAPE AND REEL TO = 100 min., 100 mult. T1 = 1000 min., 1000 mult. T3 = 300 min., 300 mult. T5 = 500 min., 500 mult. TF = full reel TS = 25 min., 1 mult. TI = 25 min., 1 mult. (item single lot date code) TP = 25 min., 1 mult. (package unit single lot date code)	V = Vishay Thin Film ⁽¹⁾ M = part marked ⁽²⁾

Notes

- For all other M/D55342 failure rate options please see VTF standard E/H datasheet: www.vishay.com/ppg?60018
- ⁽¹⁾ For K, L and M TCR ≥ 1 % tolerance add a V at end of part number to specify Vishay Thin Film vs. Dale Thick Film.
E.g.: M55342K06B1F00TWSV
- ⁽²⁾ Option 1 marking only case size 02 not available. Part marking available on the following: 0705, 1005, 1206, 1505, 2010, 2208, 2512



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