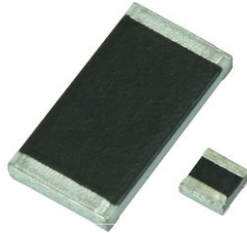




Thick Film Chip Resistors, Military/Established Reliability MIL-PRF-55342 Qualified, Type RM



FEATURES

HALOGEN FREE

- Fully conforms to the requirements of MIL-PRF-55342
Established reliability - verified failure rate; M, P, R, S and T levels
Construction is sulfur impervious against a high sulfur environment (ASTM B 809-95 test method)
100 % group A screening per MIL-PRF-55342
Termination style B - tin/lead wraparound over nickel barrier
Operating temperature range is - 55 °C to + 150 °C
For MIL-PRF-32159 zero ohm jumpers, see Vishay Dale's RCWPM Jumper (Military M32159) datasheet (www.vishay.com/doc?31028)
Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

Table with 2 columns: Specification Name and Value. Includes Resistive element (Ruthenium oxide), Encapsulation (Epoxy), Substrate (96 % alumina), Termination (Solder-coated nickel barrier), and Solder finish (Tin/lead solder alloy).

Table with 10 columns: VISHAY DALE MODEL, MIL-PRF-55342 STYLE, MIL SPEC. SHEET, TERM., CASE SIZE, POWER RATING P70 °C W, MAX. WORKING VOLTAGE (1) V, RESISTANCE RANGE Ω, TOLERANCE ± %, TEMPERATURE COEFFICIENT (2) ± ppm/°C. Lists various resistor models and their specifications.

Notes

- DSCC has created a series of drawings to support the need for 0201-sized product. Vishay Dale is listed as a resource on this drawing as follows:

Table with 8 columns: DSCC DRAWING NUMBER, VISHAY DALE MODEL, TERM., POWER RATING P70 °C W, RES. RANGE Ω, RES. TOL. ± %, TEMP. COEF. ± ppm/°C, MAX. WORKING VOLTAGE (1) V. Row 1: 07009, RCWP-0201, B, 0.05, 10 to 46.4 / 47 to 1M, 1, 5, 200 / 100, 30.

This drawing can be viewed at: www.landandmaritime.dla.mil/Programs/MilSpec/ListDwgs.aspx?DocTYPE=DSCCdwg.

(1) Continuous working voltage shall be sqrt(P x R) or maximum working voltage, whichever is less.

(2) Characteristics: K = ± 100 ppm/°C; M = ± 300 ppm/°C.

(3) MIL case size 0705 and EIA case size 0805 are dimensionally the same.



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: M55342M02B10E0RWB (preferred part number format)

M	5	5	3	4	2	M	0	2	B	1	0	E	0	R	W	B	
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MIL STYLE	CHARACTERISTICS	SPEC. SHEET	TERMINATION STYLE	VALUE AND TOLERANCE	FAILURE RATE	PACKAGING ⁽¹⁾	SPECIAL
D55342 applies to Style 07 (RM1206) only. M55342 applies to all other styles.	K = 100 ppm M = 300 ppm	(see Standard Electrical Specifications table)	B = Pre-tinned nickel barrier, wraparound	(see Tolerance and Multipliers table)	C = Non-ER M = 1.0 %/1000 h P = 0.1 %/1000 h R = 0.01 %/1000 h S = 0.001 %/1000 h T = Space level	TP = Tin/lead, T/R (full) TN = Tin/lead, T/R (full), w/ESD UL = Tin/lead, T/R single lot date code S3 = Tin/lead, T/R (1000 pieces) SV = Tin/lead, T/R (1000 pieces), w/ESD WB = Tin/lead, waffle tray WA = Tin/lead, waffle tray, w/ESD WL = Tin/lead, waffle tray, single lot date code S2 = Tin/lead, T/R (500 pieces) SU = Tin/lead, T/R (500 pieces), w/ESD S6 = Tin/lead, T/R (300 pieces) ST = Tin/lead, T/R (300 pieces), w/ESD	Blank = Standard (Dash number) (Up to 1 digits) S = Space level w/option 1 part marking (-97) T = Space level (-98) 2 = Option 1 part marking (-20) 3 = Options 2 and 3 part marking (-30)

Historical Part Numbering: M55342M02B10E0R (will continue to be accepted)

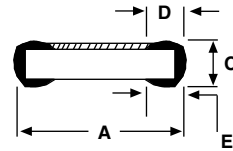
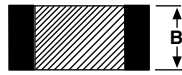
M55342	M	02	B	10E0	R	WB
MIL STYLE	CHARACTERISTICS	SPEC. SHEET	TERMINATION STYLE	VALUE AND TOLERANCE	FAILURE RATE	PACKAGING CODE

Notes

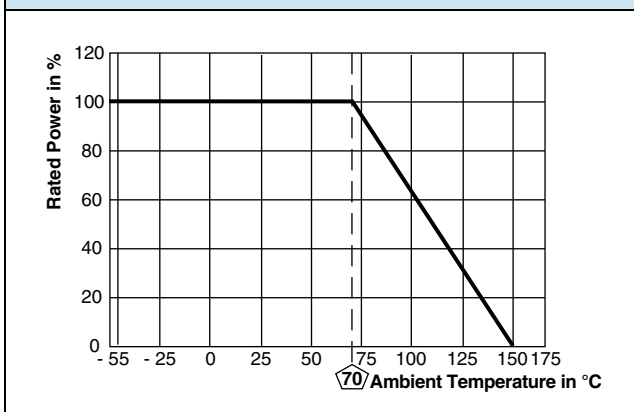
- For additional information on packaging, refer to the Surface Mount Resistor Packaging document (www.vishay.com/doc?31543).
- ⁽¹⁾ Products with space level failure rates are only offered in packaging codes with ESD overpack and labeling. For all other failure rates, the ESD pack codes are an optional type of packaging.

RESISTANCE TOLERANCE AND MULTIPLIERS

TOLERANCE				MULTIPLIER	VALUE RANGE (Ω)
± 1 %	± 2 %	± 5 %	± 10 %		
D	G	J	M	1	1 to 9xx
E	H	K	N	1000	1K to 9xxK
F	T	L	P	1 000 000	1M to 22M
Examples:		11D3 = 11.3 Ω ± 1 % 10E0 = 10 kΩ ± 1 % 332D = 332 Ω ± 1 % 2F21 = 2.21 MΩ ± 1 % 51G0 = 51 Ω ± 2 % 10H0 = 10 kΩ ± 2 % 33H0 = 33 kΩ ± 2 % 22T0 = 22 MΩ ± 2 %	15J0 = 15 Ω ± 5 % 10K0 = 10 kΩ ± 5 % 560K = 560 kΩ ± 5 % 8L20 = 8.2 MΩ ± 5 % 10M0 = 10 Ω ± 10 % 10N0 = 10 kΩ ± 10 % 2P70 = 2.7 MΩ ± 10 % 8P20 = 8.2 MΩ ± 10 %		

DIMENSIONS in inches (millimeters)


VISHAY DALE MODEL	MIL-PRF-55342 STYLE	MIL SPEC. SHEET	A (LENGTH)	B (WIDTH)	C (HEIGHT)	D (TOP TERM)	E (BOTTOM TERM)
RCWPM-0502	RM0502	01	0.055 ± 0.005 (1.40 ± 0.13)	0.023 ± 0.003 (0.58 ± 0.08)	0.015 ± 0.003 (0.38 ± 0.08)	0.010 ± 0.005 (0.25 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-550	RM0505	02	0.055 ± 0.005 (1.40 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-5100	RM1005	03	0.105 ± 0.005 (2.67 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-5150	RM1505	04	0.155 ± 0.005 (3.94 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-7225	RM2208	05	0.230 ± 0.005 (5.84 ± 0.13)	0.075 ± 0.005 (1.91 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)
RCWPM-575	RM0705	06	0.080 ± 0.005 (2.03 ± 0.13)	0.050 ± 0.005 (1.27 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.016 ± 0.008 (0.41 ± 0.20)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-1206	RM1206	07	0.125 ± 0.005 (3.18 ± 0.13)	0.063 ± 0.005 (1.60 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-2010	RM2010	08	0.197 ± 0.006 (5.00 ± 0.15)	0.098 ± 0.005 (2.49 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)
RCWPM-2512	RM2512	09	0.250 ± 0.005 (6.35 ± 0.13)	0.124 ± 0.005 (3.15 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)
RCWPM-1100	RM1010	10	0.105 ± 0.005 (2.67 ± 0.13)	0.100 ± 0.005 (2.54 ± 0.13)	0.020 ± 0.005 (0.51 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-0402	RM0402	11	0.039 ± 0.003 (0.99 ± 0.08)	0.020 ± 0.003 (0.51 ± 0.08)	0.013 ± 0.003 (0.33 ± 0.08)	0.010 ± 0.005 (0.25 ± 0.13)	0.010 ± 0.005 (0.25 ± 0.13)
RCWPM-0603	RM0603	12	0.063 ± 0.005 (1.60 ± 0.13)	0.032 ± 0.005 (0.81 ± 0.13)	0.018 ± 0.005 (0.46 ± 0.13)	0.012 ± 0.005 (0.30 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-0302	RM0302	13	0.034 ± 0.004 (0.86 ± 0.10)	0.021 ± 0.003 (0.53 ± 0.08)	0.013 ± 0.003 (0.33 ± 0.08)	0.007 ± 0.005 (0.18 ± 0.13)	0.008 ± 0.005 (0.20 ± 0.13)
RCWP-0201			0.024 ± 0.002 (0.61 ± 0.05)	0.012 ± 0.002 (0.30 ± 0.05)	0.009 ± 0.002 (0.23 ± 0.05)	0.006 ± 0.003 (0.15 ± 0.08)	0.006 + 0.002 - 0.004 (0.15 + 0.05 - 0.10)

DERATING CURVE

CAGE CODE: 91637 and SH903



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