

Vishay Dale

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



MATERIAL SPECIFICATIONS										
Resistive element	Ruthenium oxide									
Encapsulation	Ероху									
Substrate	96 % alumina									
Termination	Solder-coated nickel barrier									
Solder finish	Tin / lead solder alloy									

FEATURES

HALOGEN FREE

- Fully conforms to the requirements of MIL-PRF-55342
- Established reliability verified failure rate; M, P, R, U, S, V, 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 -65 °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 <u>www.vishay.com/doc?99912</u>

STANDARD ELECTRICAL SPECIFICATIONS													
VISHAY DALE MODEL	MIL-PRF-55342 STYLE	MIL SPEC. SHEET	TERM.	CASE SIZE	POWER RATING P _{70 °C} W	MAX. WORKING VOLTAGE ⁽¹⁾ V	RESISTANCE RANGE Ω	TOLERANCE ± %	TEMPERATURE COEFFICIENT (2) ± ppm/°C				
DOWDM 0500							1 to 9.1	2, 5, 10	200, 300				
RCWPM-0502, RCWPM-0502-98	RM0502	01	В	0502	0.05	40	10 to 22M	1, 2, 5, 10	100, 200, 300				
110111111111111111111111111111111111111							10 to 10M	0.5	100, 200, 300				
DOWDM 550							1 to 9.1	2, 5, 10	200, 300				
RCWPM-550, RCWPM-550-98	RM0505	02	В	0505	0.125	40	10 to 22M	1, 2, 5, 10	100, 200, 300				
110441 141-220-30							10 to 10M	0.5	100, 200, 300				
DOM/DM 5400							1 to 5.1	2, 5, 10	200, 300				
RCWPM-5100, RCWPM-5100-98	RM1005	03	В	1005	0.20	75	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
HC44LINI-2100-90							5.62 to 10M	0.5	100, 200, 300				
D014/D14 E4E0				1505			1 to 5.1	2, 5, 10	200, 300				
RCWPM-5150, RCWPM-5150-98	RM1505	04	В		0.15	125	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
HC44F141-2120-96							5.62 to 10M	0.5	100, 200, 300				
D014/D14 =005					0.225		1 to 5.1	2, 5, 10	200, 300				
RCWPM-7225, RCWPM-7225-98	RM2208	05	В	2208		175	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
HCVVFIVI-1223-90							5.62 to 10M	0.5	100, 200, 300				
DOMEST	RM0705			0705 (3)	0.15		1 to 5.1	2, 5, 10	200, 300				
RCWPM-575, RCWPM-575-98		06	В			50	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
HC44F141-373-96							5.62 to 10M	0.5	100, 200, 300				
DOLLIDA 1000							1 to 5.1	2, 5, 10	200, 300				
RCWPM-1206, RCWPM-1206-98	RM1206	07	В	1206	0.25	100	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
HCVVFIVI-1200-96							5.62 to 10M	0.5	100, 200, 300				
D014/D14 0040							1 to 5.1	2, 5, 10	200, 300				
RCWPM-2010, RCWPM-2010-98	RM2010	08	В	2010	0.80	150	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
HCVVFIVI-2010-96							5.62 to 10M	0.5	100, 200, 300				
DOM/DM 0540							1 to 5.1	2, 5, 10	200, 300				
RCWPM-2512, RCWPM-2512-98	RM2512	09	В	2512	1.0	200	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
HCVVFIVI-2312-90							5.62 to 10M	0.5	100, 200, 300				
D014/D14 4400							1 to 5.1	2, 5, 10	200, 300				
RCWPM-1100, RCWPM-1100-98	RM1010	10	В	1010	0.50	75	5.6 to 22M	1, 2, 5, 10	100, 200, 300				
110441 141-11100-90							5.62 to 10M	0.5	100, 200, 300				
DOWDM 0400							1 to 9.1	2, 5, 10	200, 300				
RCWPM-0402, RCWPM-0402-98	RM0402	11	В	0402	0.05	30	10 to 22M	1, 2, 5, 10	100, 200, 300				
110441 141-0402-90							10 to 10M	0.5	100, 200, 300				

Revision: 10-Mar-17 1 Document Number: 31010



Vishay Dale

STANDARD E	STANDARD ELECTRICAL SPECIFICATIONS														
VISHAY DALE MODEL	MIL-PRF-55342 STYLE	MIL SPEC. SHEET	TERM.	CASE SIZE	POWER RATING P _{70°C} W	MAX. WORKING VOLTAGE ⁽¹⁾ V	RESISTANCE RANGE Ω	TOLERANCE ± %	TEMPERATURE COEFFICIENT (2) ± ppm/°C						
RCWPM-0603,	RM0603	12		0603	0.10		1 to 5.1	2, 5, 10	200, 300						
RCWPM-0603-98			В			50	5.6 to 22M	1, 2, 5, 10	100, 200, 300						
110771 171 0000 30							5.62 to 10M	0.5	100, 200, 300						
DOWDM 0000		13	В	0302	0.04		1 to 9.1	2, 5, 10	200, 300						
RCWPM-0302, RCWPM-0302-98	RM0302					15	10 to 22M	1, 2, 5, 10	100, 200, 300						
110441 141-0302-90							10 to 10M	0.5	100, 200, 300						

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:

| MAY WORKING

DSCC DRAWING NUMBER	VISHAY DALE MODEL	TERM.	POWER RATING P _{70°C} W	RES. RANGE Ω	RES. TOL. ± %	TEMP. COEF. ± ppm/°C	MAX. WORKING VOLTAGE ⁽¹⁾ V	
07009	RCWP-0201	В	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

- Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less Characteristics: K = \pm 100 ppm/°C; L = \pm 200 ppm/°C; M = \pm 300 ppm/°C MIL case size 0705 and EIA case size 0805 are dimensionally the same

GLOBA	GLOBAL PART NUMBER INFORMATION																									
New Glob	New Global Part Numbering: M55342M02B10E0RWB (preferred part number format)																									
М	5	5	3	4		2	M)	2		В	1	I	0)	E		0	ļL	R		W	E	3	
				11 -						1			1						1							
MIL STYLE	СНА	RACTE	RISTICS		PEC. HEET		TERN S	MINAT STYLE				AND ANCE			FAI R	ATE			Р	ACK	AGII	NG	(1)		SPEC	IAL
p55342 applies to Style 07 (RM1206) only. M55342 applies to all other styles.	L	= 100 = 200 = 300	ppm	Speci	ectric	al ions	B = p nicke wrap		rier,			erance ipliers e)	F U S	M = P = R = = 0 S = 0	0.00	%/ %/ %/ 1 %/	/100 /100 /100 1000 5/100	0 h 0 h 1 h ⁽²⁾ 00 h 0 h ⁽²⁾	T T/ UL singg S T/F SV (1000 W w singg S T// SU (5000 S T/ ST	R = R (fur = tirr = tirr = R (fur = tirr = R (fur = tirr = tirr = R (fur = tirr = tirr = R (fur = tirr = tirr = tirr = R (fur = tirr = tirr = tirr = tirr = tirr = R (fur = tirr	R (full), v (full), v (left), v (lef	ill) lea w/E ad, te c lea oiec ad,), w lea ray, lea ray, te c ad, , w lea iec ad, , w lea oiec ad, , w lea oiec ad,	ad, SD, T/R code d, ces) T/R /ESD ad, , code dd, es) , T/R /ESD dd,	oir oir	p to 1 D = 0. coleran S = space option arking T = ace lev 2 = optio oart ma (-20) 3 =	ard umber) digits) 5 % ce (3) = level 1 part (-97) (4) = rel (-98) = n 1 arking (4) 2 and 3 arking
Historica	l Part	Numb	ering: I	VI55342	2M02	2B10	EOR (v	vill c	ontin	ue to	o be	acce	pte	ed)												
M55342	2		М		ΙE		02				В][1	0E	0				R				WB	
MIL STYLE		СНА	RACTEF	RISTICS		SPE	C. SHI	EET			/INA	TION E			VALU TOLE					FAIL RA	URI	E		P/	COD	

- For additional information on packaging, refer to the Surface Mount Resistor Packaging document (www.vishay.com/doc?31543)
- 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
- Failure rates U and V require group A and B inspection ran on each production lot
- (3) Add a "D" after the packaging code at the end of the global part number to specify Vishay Dale Thick Film product with a tolerance of 0.5 %
- (4) MIL spec option 1, 2, and 3 part marking is not offered for the slash sheet 01, 02, 11, and 13 sizes

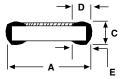


Vishay Dale

RESISTANCE	RESISTANCE TOLERANCE AND MULTIPLIERS													
		MULTIPLIER	VALUE											
± 0.5 %	± 1 %	± 2 %	± 5 %	± 10 %	MOLTIPLIER	RANGE (Ω)								
W	D	G	J	М	1	1 to 9xx								
Y	E	Н	К	N	1000	1K to 9xxK								
Z	F	Т	L	Р	1 000 000	1M to 22M								
Examples: $38W8 = 38.8 \Omega \pm 0$ $10Y0 = 10 \text{ k}\Omega \pm 0$ $988W = 988 \Omega \pm 0$ $2Z13 = 2.13 \text{ M}\Omega \pm 0$.5 %).5 %	11D3 = 11. 10E0 = 10 k 332D = 332 2F21 = 2.2 51G0 = 51 10H0 = 10 33H0 = 33 22T0 = 22 k	$K\Omega \pm 1 \%$ 2 $\Omega \pm 1 \%$ 1 $M\Omega \pm 1 \%$ $\Omega \pm 2 \%$ $k\Omega \pm 2 \%$ $k\Omega \pm 2 \%$	10K(560) 8L20 10M 10N(2P70	$0 = 15 \Omega \pm 5 \%$ $0 = 10 \text{ k}\Omega \pm 5 \%$ $0 = 60 \text{ k}\Omega \pm 5 \%$ $0 = 8.2 \text{ M}\Omega \pm 5 \%$ $0 = 10 \Omega \pm 10 \%$ $0 = 10 \text{ k}\Omega \pm 10 \%$ $0 = 2.7 \text{ M}\Omega \pm 10 \%$ $0 = 8.2 \text{ M}\Omega \pm 10 \%$									

DIMENSIONS in inches (millimeters)

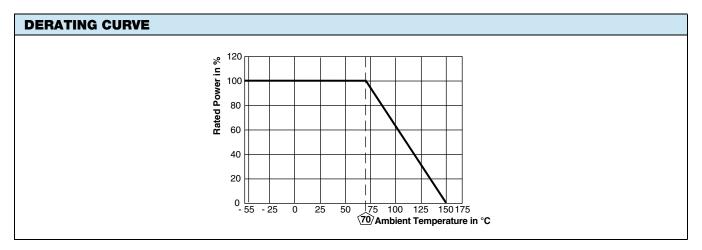




	1		1	1			1
VISHAY DALE MODEL	MIL-PRF-55342 STYLE	MIL SPEC. SHEET	A (LENGTH)	B (WIDTH)	C (HEIGHT)	D (TOP TERM)	E (BOTTOM TERM)
RCWPM-0502	RM0502	01	0.055 ± 0.005 (1.40 ± 0.13)	0.023 ± 0.003 (0.58 ± 0.08)	0.015 ± 0.003 (0.38 ± 0.08)	0.010 ± 0.005 (0.25 ± 0.13)	0.015 ± 0.005 (0.38 ± 0.13)
RCWPM-550	RM0505	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)



Vishay Dale



CAGE CODE: 91637 and 2799A (formerly SH903)



Legal Disclaimer Notice

Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Thick Film Resistors - SMD category:

Click to view products by Vishay manufacturer:

Other Similar products are found below:

CRCW04028R20JNEE CRCW06036K80FKEE CRG1206F1K58 CRL0603-FW-R700ELF M55342K06B6E19RWL RC1005F1072CS

RC1005F471CS RC1005F4751CS RCP0603W100RGED RCWP72251K47FKWB RLR05C7501GPB14 RLR07C5111FSBSL ERJ
IGMF1R00C ERJ-1GMF1R20C ERJ-1GMF2R55C ERJ-1GMF8R66C 25121WF1003T4E 25.501.3653.0 290-1.0M-RC 292-1.0M-RC 292
2.2K-RC 292-4.7K-RC 25121WF4700T4E 292-470K-RC 302-1.0M-RC CPG1206F10KC CRCW02011R00FXED CRCW060315K0FKEE

CRCW060320K5FKEE CRG0201F10K RCG0402150RFKED RCG04023K92FKED RCP2512B100RGWB RCWP110010R0FKS3

RCWP11002K00FKS3 RCWP12061K00FKS2 3520510RJT 352075KJT M55342K11B9E53RUL RMC16-102JT RMC1JPTE TR0603MR
075K1L 5-2176094-4 35202K7JT WF06Q1000FTL ERJ-S03J1R0V ERJ-S14J4R7U CHP2512L4R30GNT CPCC10270R0JE32

RCWP11001K00FKS3