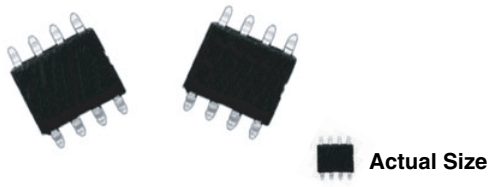
SMD Molded, 50 Mil Pitch, Dual-In-Line Thin Film Resistor Networks



Actual Size

FEATURES

- Tight TCR tracking down to 5 ppm/°C
- Monolithic reliability
- Low noise < -35 dB
- SMD precision networks
- SO08, SO14, SO16 cases
- MSL 1 to JEDEC J-STD-020C specification

Pb-free

DESIGN SUPPORT TOOLS AVAILABLE

3D Models

The RMKM series of small outline surface mount style molded package can accommodate resistor network to your particular application requirements in compact circuit integration. The resistor element is a special nickel chromium film formulation on oxidized silicon.

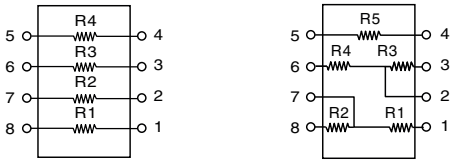
Utilizing those networks will enable you to take advantage of parametric performances which will introduce in your circuitry high thermal and load life stability (0.05 % absolute, 0.02 % ratio, 2000 h at +70 °C at Pn) together with the added benefits of low noise and rapid rise time.

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	10 ppm/°C	5 ppm/°C
	ABSOLUTE	RATIO
TOL.	0.1 %	0.05 %

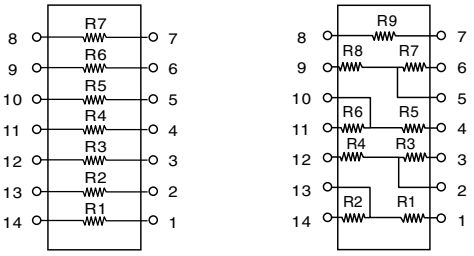
SCHEMATIC

RMKM S408 RMKM S508 — **Case SO08**

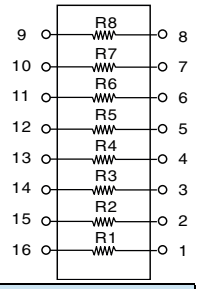


For other configurations, please consult factory.

RMKM S714 RMKM S914 — **Case SO14**



RMKM S816 — **Case SO16**



STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE	RESISTANCE RANGE Ω	POWER RATING PER RESISTOR W	POWER RATING PER PACKAGE $P_{70\,°C}$ W	ABSOLUTE TOLERANCE ± %	RATIO TOLERANCE (2) ± %	ABSOLUTE TCR (1) ± ppm/°C	RATIO TCR ± ppm/°C
RMKMS	SO08	500 to 200K	0.050	0.250	0.1, 0.5, 1	0.05, 0.1, 0.5	10, 15	5
RMKMS	SO14	500 to 200K	0.050	0.500	0.1, 0.5, 1	0.05, 0.1, 0.5	10, 15	5
RMKMS	SO16	500 to 200K	0.050	0.500	0.1, 0.5, 1	0.05, 0.1, 0.5	10, 15	5

Notes

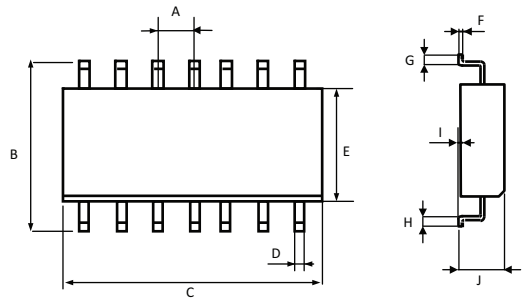
(1) ± 10 ppm/°C at 0 °C to +70 °C; ± 15 ppm/°C at -55 °C to ± 125 °C

(2) 0.02 % upon request

PERFORMANCES

TEST	SPECIFICATIONS	CONDITION
Stability: ΔR Absolute	0.05 %	2000 h at +70 °C at P
Stability: ΔR Ratio	0.02 %	2000 h at +70 °C at P
Voltage coefficient	< 0.1 ppm/V	
Working voltage	50 V_{DC} maximum	
Operating temperature range	-55 °C to +125 °C	
Storage temperature range	-55 °C to +155 °C	
Noise	-35 dB (typical)	MIL-STD-202, meth. 308
Thermal EMF	0.1 µV/°C	
High temp. storage Shelf life stability	0.075 %	2000 h at +125 °C
	0.025 %	2000 h at +125 °C

DIMENSIONS AND IMPRINTING



Imprinting:

VISHAY logo, series, ohmic value, tolerance, manufacturing date

DIMENSION	INCHES	MILLIMETERS
A	Pitch 0.05	Pitch 1.27
B	0.230/0.244	5.84/6.2
C (SO08)	0.189/0.196	4.80/4.98
C (SO14)	0.337/0.344	8.56/8.74
C (SO16)	0.386/0.393	9.80/9.98
D	0.014/0.020	0.35/0.51
E	0.150/0.157	3.81/3.99
F	0.007/0.010	0.17/0.254
G, H	0.016/0.035	0.40/0.89
I	0.004/0.010	0.10/0.254
J	0.061/0.068	1.55/1.73

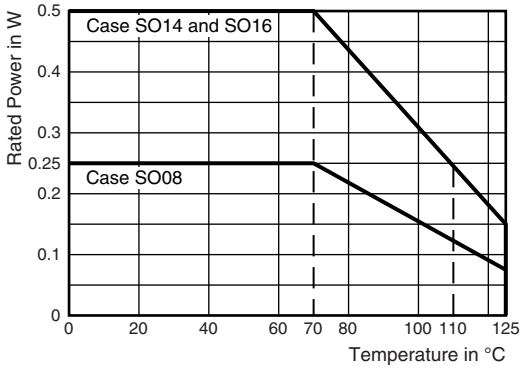
MECHANICAL SPECIFICATIONS

Mechanical protection		Epoxy molded assembly
Terminal leads		100 % tin
Resistive element		Passivated nichrome
Unit weight:	Case SO08	0.070 g
	Cases SO14, SO16	0.146 g

MARKING

TOLERANCE CODING				
A	B	D	F	X
0.1 %	0.1 %	0.5 %	1 %	0.1 %
0.05 %	0.1 %	0.1 %	0.5 %	0.02 % (on request only)

DERATING CURVE



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: RMKMS408-10KFDT99 (preferred part number format)

R	M	K	M	S	4	0	8	-	1	0	K	F	D	T	9	9

GLOBAL MODEL	VALUE	ABS. TOLERANCE	RATIO TOLERANCE	PACKAGING	OPTION
RMKMS408 **RMKMS508** **RMKMS816** **RMKMS714** **RMKMS914**	Decimal: R or K	**B** = 0.1 % **D** = 0.5 % **F** = 1.0 %	**D** = 0.5 % **B** = 0.1 % **W** = 0.05 % **P** = 0.02 %	**Blank** = tube **T** (1) = tape	Leave blank if no option

Custom Design: CNM 1138

CNM	1138
GLOBAL MODEL	REFERENCE

RMKMS 408	10K	1 % abs 0.5 % ratio	T	R0099
HISTORICAL MODEL	VALUE	ABS. TOLERANCE AND RATIO TOLERANCE	PACKAGING **Blank** = tube **T** (1) = tape	OPTION Leave blank if no option

Note

- For more information see “Codification of Packaging” table

CODIFICATION OF PACKAGING	
CODE 18	**PACKAGING**
PLASTIC TAPE (in standard for all sizes)	
T	100 min., 1 mult
TA	100 min., 100 mult
TB	250 min., 250 mult
TC	500 min., 500 mult
TD	1000 min., 1000 mult

HISTORICAL PART NUMBER EXAMPLES

- RMKMS816-10KBWT250 (tapes of 250 pieces)
- RMKMS816-1KDBT250 (tapes of 250 pieces)
- CNM1138T250 (tapes of 250 pieces)
- CNM1490T250 (tapes of 250 pieces)

Historical part numbers are not recommended, but can still be used for ordering.

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.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

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.