## **RMKMS (CNM)**

**Vishay Sfernice** 



**FEATURES** 

 Monolithic reliability Low noise < -35 dB</li> SMD precision networks

TCR

TOL

SO08, SO14, SO16 cases

TYPICAL PERFORMANCE

Tight TCR tracking down to 5 ppm/°C

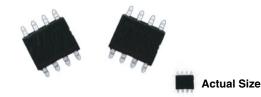
MSL 1 to JEDEC J-STD-020C specification

ABSOLUTE

10 ppm/°C

ABSOLUTE

0.1 %



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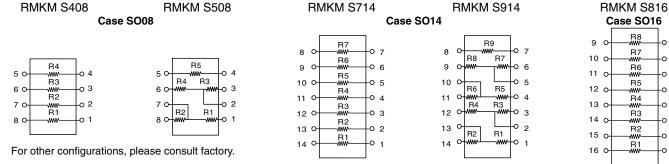
### DESIGN SUPPORT TOOLS AVAILABLE



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.

#### SCHEMATIC



STANDARD ELECTRICAL SPECIFICATIONS								
MODEL	SIZE	RESISTANCE RANGE Ω	POWER RATING PER RESISTOR W	POWER RATING PER PACKAGE P <sub>70°C</sub> W	ABSOLUTE TOLERANCE ± %	RATIO TOLERANCE <sup>(2)</sup> ± %	ABSOLUTE TCR <sup>(1)</sup> ± 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: ∆R Absolute	0.05 %	2000 h at +70 °C at P		
Stability: $\Delta R$ Ratio	0.02 %	2000 h at +70 °C at P		
Voltage coefficient	< 0.1 ppm/V			
Working voltage	50 V <sub>DC</sub> 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 tomp, storage Shalf life stability	0.075 %	2000 h at +125 °C		
High temp. storage Shelf life stability	0.025 %	2000 h at +125 °C		

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1 For technical questions, contact: sferthinfilm@vishay.com Document Number: 60004



TRACKING

5 ppm/°C

RATIO

0.05 %

-0 8

-07

-0 6

-0 5

-0 4

-03

-0 2

-0 1

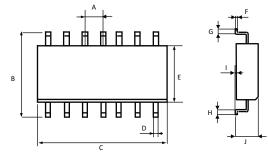
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### **DIMENSIONS AND IMPRINTING**



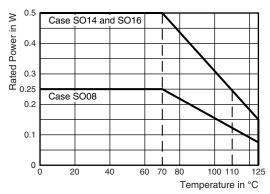
Imprinting: VISHAY logo, series, ohmic value, tolerance, manufacturing date

MECHANICAL SPECIFICATIONS			
Mechanical pr	otection	Epoxy molded assembly	
Terminal leads	6	100 % tin	
Resistive elem	nent	Passivated nichrome	
Unit weight:	Case SO08	0.070 g	
	Cases SO14, SO16	0.146 g	

MARKING					
TOLERANCE CODING					
А	В	D	F	Х	
0.1 %	0.1 %	0.5 %	1 %	0.1 %	
0.05 %	0.1 %	0.1 %	0.5 %	0.02 % (on request only)	

DIMENSION	INCHES	MILLIMETERS	
А	Pitch 0.05	Pitch 1.27	
В	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	
1	0.004/0.010	0.10/0.254	
J	0.061/0.068	1.55/1.73	

### **DERATING CURVE**



#### **GLOBAL PART NUMBER INFORMATION** New Global Part Numbering: RMKMS408-10KFDT99 (preferred part number format) 9 R Μ Κ Μ S 4 0 8 0 Κ F D т 9 1 GLOBAL MODEL VALUE ABS. TOLERANCE **RATIO TOLERANCE** PACKAGING OPTION RMKMS408 Decimal: **B** = 0.1 % **D** = 0.5 % Blank = tube Leave blank RMKMS508 R or K **D** = 0.5 % **B** = 0.1 % $T^{(1)} = tape$ if no option RMKMS816 **F** = 1.0 % **W** = 0.05 % RMKMS714 **P** = 0.02 % RMKMS914 Custom Design: CNM 1138 CNM 1138 GLOBAL MODEL REFERENCE **RMKMS 408** 10K 1 % abs 0.5 % ratio т R0099 ABS. TOLERANCE AND HISTORICAL MODEL VALUE PACKAGING OPTION RATIO TOLERANCE Blank = tube Leave blank **T**<sup>(1)</sup> = tape if no option Note

· For more information see "Codification of Packaging" table

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CODIFICATION OF PACKAGING				
CODE 18	PACKAGING			
PLASTIC TAPE (in standard for all sizes)				
Т	100 min., 1 mult			
ТА	100 min., 100 mult			
ТВ	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.



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