NMA/NK

Vishay Draloric

Metal Film Resistors, High Positive TCR (4500 ± 500 for size 0207)

FEATURES

- High positive temperature coefficient (4500 ± 500 for size 0207)
- Stable film structure
- Lead (Pb)-free solder contacts
- Pure tin plating provides compatibility with lead (Pb)-free and lead containing soldering processes
- Compatible with "Restriction of the use of Hazardous Substances" (RoHS) directive 2002/95/EC (issue 2004)
- Temperature sensitive overload limiting
- Suitable for measuring techniques and temperature sensing applications

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{70\,°C}$ W	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE Ω	E-SERIES
NMA0207/NK2	0.4	4500 ± 500	± 5; ± 10	R10 - 47R	24
NK4	0.7	see graph	± 5 ± 10; ± 20	1R0 - 47R R10 - 47R	24

Notes:

- Coating: 0207: green, NK4: brown
- Further values on request
- Marking: 5th band white
- Rated voltage $\sqrt{P \times R}$

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	NMA0207 NK2	NK4
Rated Dissipation at 70 °C	W	0.4	0.7
Insulation Voltage (1 Min)	V_{eff}	> 700	> 500
Insulation Resistance	Ω	≥ 10^{11}	≥ 10^{10}
Thermal Resistance	K/W	≤ 220	≤ 130
Category Temperature Range	°C	- 55 to + 155	- 55 to + 155
Terminal Strength, Axial	N	> 50	> 50
Failure Rate	10^{-9}/h	< 10	< 10
Weight	g	0.22	0.7

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PART NUMBER AND PRODUCT DESCRIPTION NMA/NK-SERIES

PART NUMBER: NMA0207001508K2500

N	M	A	0	2	0	7	0	0	1	5	0	8	K	2	5	0	0

MODEL/SIZE	SPECIAL CHARACTER	TCR	VALUE	TOLERANCE	PACKAGING (1)	SPECIAL
NMA0207/NK2 **NK40414**	0 = Neutral	**0** = Neutral **See diagram**	**3 digit value** **1 digit multiplier** MULTIPLIER **7** = *10^{-3} **8** = *10^{-2} **9** = *10^{-1}	**J** = ± 5 % **K** = ± 10 % **M** = ± 20 %	**25** = A5 **D5** = R5 **22** = A2 **FE** = RE **41** = A1 G73	Up to 2 digits **00** = Standard

PRODUCT DESCRIPTION: NMA0207 1R5 10 % A5

NMA0207	1R5	10 %	A5
MODEL	RESISTANCE VALUE	TOLERANCE	PACKAGING (1)
NMA0207/NK2 **NK4**	**1R5** = 1.5 Ω **10R** = 10 Ω	**± 5 %** **± 10 %** **± 20 %**	**R5** **A5** **A2** **RE** **A1**

Notes:

(1) Please refer to table PACKAGING, see next page.

- The PART NUMBER shown above is to facilitate the unified part numbering system for ordering products.

PACKAGING

MODEL	REEL			BOX		
	PIECES/REEL	CODE	M.O.Q PACKAGING UNITS	PIECES/BOX	CODE	M.O.Q. PACKAGING UNITS
NMA0207/NK2	5000	R5	1	2000 5000	A2 A5	2 1
NK4	2500	RE	1	1000	A1	2

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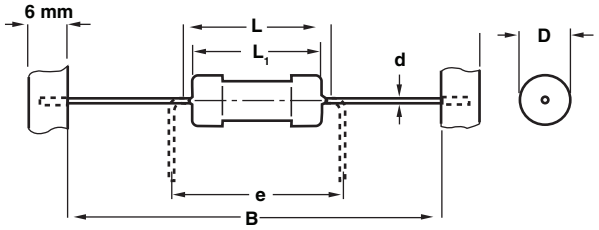
DIMENSIONS



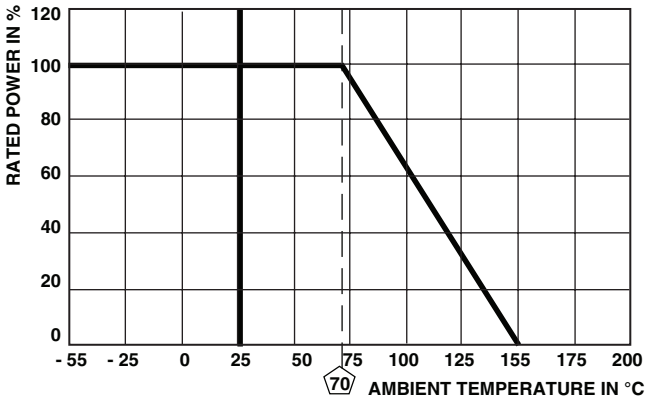
Notes:

- Taping in acc. with IEC60286-1
- d according to IEC60301
- D and L measured in acc. with IEC60294

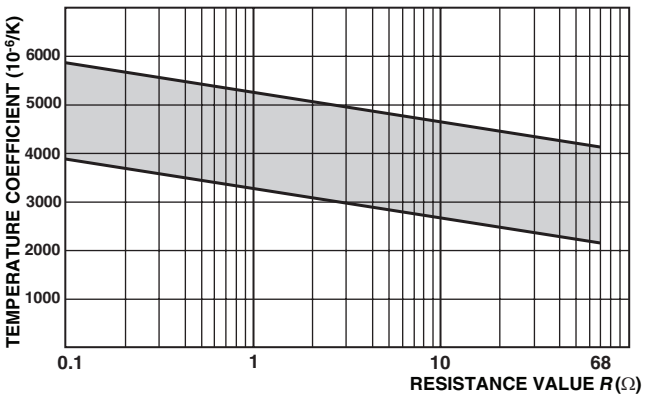
MODEL	DIMENSIONS [in millimeters]					
	$D_{max.}$	L	$L_{1\ max.}$	B	d	e
NMA0207/NK2	$2.5_{-0.3}$	$6.3_{-0.5}$	7.0	53 ± 1 (1)	0.6	7.5
NK4	$4.1_{-0.5}$	$12.0_{-1.5}$	16.0	73 ± 1	0.8	15.0

Note:

(1) Also available in 26 mm tape spacing



DERATING



TEMPERATURE COEFFICIENT

For technical questions, contact: filmresistors.leaded@vishay.com

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High Positive TCR (4500 ± 500 for size 0207)

PERFORMANCE		
TEST	**CONDITIONS OF TEST**	**TEST RESULTS**
Endurance Test IEC 60115-1 4.25.1	1000 h at 70 °C, 1.5 h ON, 0.5 h OFF	≤ ± 1.0 %
Endurance at UCT IEC 60115-1 4.25.3	1000 h at 155 °C without load	≤ ± 1.0 %
Damp Heat Steady State IEC 60115-1 4.24; IEC 60068-2-3	56 days at 40 °C and 93 % relative humidity	≤ ± 1.0 %
Resistance to Soldering Heat IEC 60115-1 4.18, IEC 60068-2-20	10 s at 260 °C solder bath temperature	≤ ± 0.25 %
Robustness of Terminations IEC 60115-1 4.16	Tensible, bending and torsion	≤ ± 0.25 %

APPLICABLE SPECIFICATIONS

- CECC 40000/40100
- EN 1400/IEC60115-1

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