HMA0207

Vishay Draloric

Metal Film Resistors, Power Type, Miniature

FEATURES

- Metal film resistor with high power rating
- Stable film structure on special ceramic
- Good thermal distribution
- Lead (Pb)-free solder contacts on Ni barrier layer
- 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)
- For applications in power electronics

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING $P_{70°C}$ W	LIMITING ELEMENT VOLTAGE MAX. V≅	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE Ω	E SERIES
HMA0207	0.8	500	± 50	± 1	4R7 - 511K	24 - 96

- Coating - green
- Further values on request
- Marking: see appropriate catalog or web page
- Additional orange color dot at the beginning of the code

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	HMA0207
Rated Dissipation at 70°C	W	0.8
Limiting Element Voltage [1]	V≅	≤ 500
Insulation Voltage (1 min)	V_{eff}	> 700
Thermal Resistance	K/W	130
Insulation Resistance	Ω	≥ 10^{11}
Category Temperature Range	°C	- 55 to + 175
Terminal Strength, axial	N	> 50
Failure Rate	10^{-9}/h	< 5
Weight	g	0.22

[1] Rated voltage $\sqrt{P \times R}$

PART NUMBER AND PRODUCT DESCRIPTION

PART NUMBER: HMA02070C1801FD5

H	M	A	0	2	0	7	0	C	1	8	0	1	F	D	5		

MODEL	SIZE	SPECIAL CHARACTER	TC	VALUE	TOLERANCE	PACKING	SPECIAL
HMA	**0207**	**0 =** neutral	**C** = ± 50 ppm/K	**3 digit value** **1 digit multiplier**	**F** = ± 1 %	**12** = A2 (G26) **22** = A2 (G53) **25** = A5 **D5** = R5	up to 2 digits **00** = standard

MULTIPLIER

7 = $*10^{-3}$ **2** = $*10^{2}$
8 = $*10^{-2}$ **3** = $*10^{3}$
9 = $*10^{-1}$ **4** = $*10^{4}$
0 = $*10^{0}$ **5** = $*10^{5}$
1 = $*10^{1}$ **6** = $*10^{6}$

PRODUCT DESCRIPTION: HMA0207 50 1K8 1% R5

HMA0207	50	1K8	1 %	R5
MODEL	TC	RESISTANCE VALUE	TOLERANCE	PACKING[1]
HMA0207	± 50 ppm/K	**49K9** = 49.9KΩ **50R1** = 50.1Ω	**± 1 %**	**A2 (G26)** **A2 (G53)** **A5** **R5**

[1] Please refer to table PACKING, page 2.

For Technical Questions, contact ff1aresistors@vishay.com

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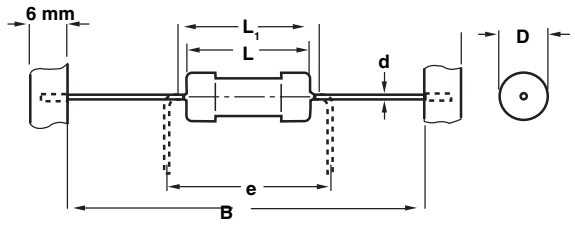
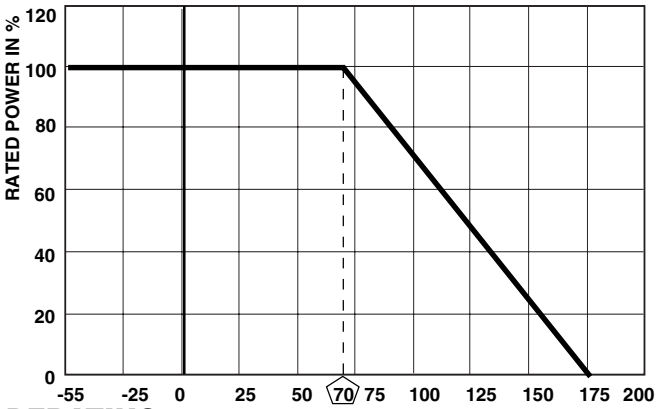
DIMENSIONS

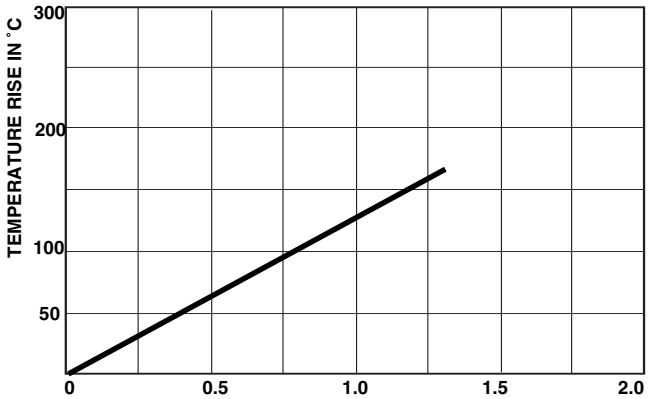


DIMENSIONS [in millimeters]						
MODEL	D_{max}	L	$L_{1\ max}$	B	d	e
HMA0207	2.5 -0.3	6.3 -0.5	7.5	53 ± 1	0.6	7.5

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



DERATING



TEMPERATURE RISE

PACKING

MODEL	REEL			BOX		
	PIECES / REEL	CODE	MIN ORDER QTY / PACKING UNITS	PIECES / BOX	CODE	MIN ORDER QTY / PACKING UNITS
HMA0207	5000	R5	1	5000 2000	A5 A2	1 2

PERFORMANCE

TEST	CONDITIONS OF TEST	REQUIREMENTS[1]
Endurance Test at 70°C IEC 60115-1 4.25.1	1000 hours at 70°C, 1.5 hours "ON", 0.5 hours "OFF"	≤ ± 1.5%
Endurance at UCT IEC 60115-1 4.25.3	1000 hours at 155°C without load	≤ ± 1.5%
Overload Test IEC 60115-1 4.13	Short time overload 5 seconds at 2.5 x rated voltage or ≤ ± twice the limiting element voltage	≤ ± 0.25%
Thermal Shock IEC 60115-1 4.19, IEC 60068-2-14	Rapid change between upper and lower category temperature	≤ ± 0.1%
Climatic Sequence IEC 60115-1 4.23	Dry heat, damp heat cycle, cold, low air pressure	≤ ± 0.5%
Damp Heat Steady State IEC 60115-1 4.24, IEC 60068-2-3	56 days at 40ºC and 93% relative humidity	≤ ± 0.5%
Resistance to Soldering Heat IEC 60115-1 4.18, IEC 60068-2-20	10 seconds at 260ºC solder bath temperature	≤ ± 0.25%
Robustness of Terminations IEC 60115-1 4.16	Tensile, bending and torsion	≤ ± 0.1%
Vibration IEC 60115-1 4.22	0.75mm or 10g, 10Hz - 500Hz 6 hours	≤ ± 0.1%

[1] for a resistance range of 10R to 511K

APPLICABLE SPECIFICATION

• CECC40000 / EN 140000 / IEC 60115 - 1

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