Wirewound Resistors, Industrial Power, Tubular, Metal Case, MCRL



FEATURES

- High power to size ratio
- Flameproof inorganic compound
- All welded construction
- Heat sink mountable to steel panel at least 10" x 10" x 0.04" (254 mm x 254 mm x 1.02 mm)
- Heat transfer increased by use of thermally conductive grease or epoxy
- Wirewound
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

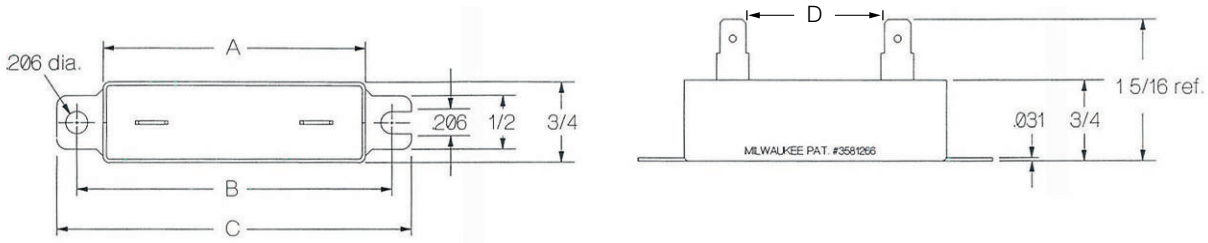
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RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

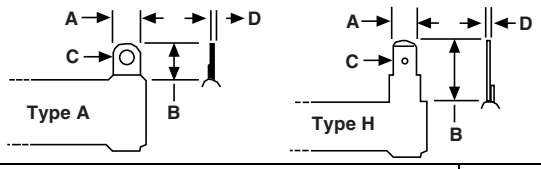
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING WITH HEAT SINK W	POWER RATING WITHOUT HEAT SINK W	RESISTANCE RANGE Ω	TOLERANCE ± %	TERMINAL STYLE
MCRL0045	12M16	45	20	1.1 to 2750	5, 10	A
MCRL0070	12M40	70	40	0.2 to 22K	5, 10	H
MCRL0100	12M59	100	50	0.2 to 66K	5, 10	H
MCRL0125	12M89	125	65	0.25 to 76K	5, 10	H

DIMENSIONS in inches (millimeters)



GLOBAL MODEL	A	B	C	D DISTANCE BETWEEN TERMINAL (REF.)		WEIGHT (TYP.) g
MCRL0045	1 (25.4)	1.438 (36.513)	1.875 (47.625)	5/16	0.312	33
MCRL0070	2.5 (63.5)	3 (76.2)	3.375 (85.725)	1 1/4	1.25	77
MCRL0100	3.688 (93.675)	4.125 (104.775)	4.563 (115.90)	2 7/16	2.44	108
MCRL0125	5.562 (141.275)	6 (152.4)	6.438 (163.525)	4 1/8	4.12	185

TERMINAL STYLE in inches (millimeters)



DIMENSIONS	A (3/16" LUG)	H (1/4" SQC)
Width (A)	0.1875 (4.7625)	0.25 (6.35)
Height (B)	0.375 (9.525)	0.625 (15.875)
Diameter (C)	0.13 (3.302)	0.065 (1.651)
Thickness (D)	0.02 (0.508)	0.032 (0.8128)

For technical questions, contact: vishaymilwaukeeresistor@vishay.com

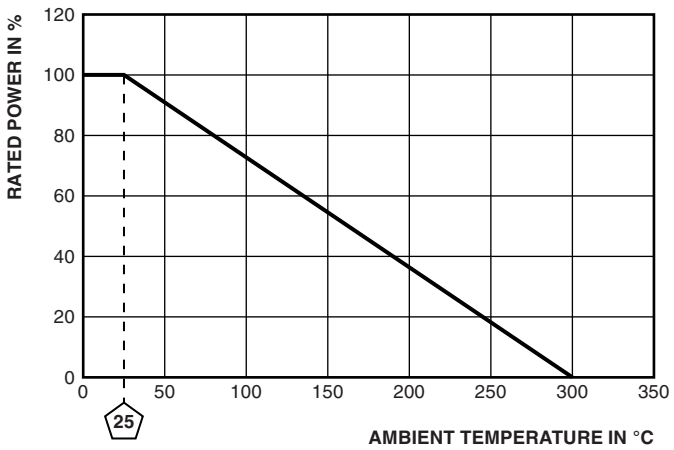
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TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Power rating	W	20 to 125
Resistance range	Ω	0.2 to 76K
Resistance tolerance	%	5 for above 1 Ω, 10 for below 1 Ω
TCR	ppm/°C	± 400, ± 180, ± 130, ± 20 (varies by wattage and resistance)
Operating temperature	°C	-40 to +300
Temperature rise	°C	275 above an ambient of 25 °C
Maximum altitude	f.a.s.l. (m.a.s.l.)	derate above 4921 f.a.s.l. (1500 m.a.s.l.)
Short-term overload (surge)		10 x rated power for 5 s
Surge windings		available
Maximum working voltage		$(P \times R)^{1/2}$
Insulation resistance	Ω	1M
Dielectric voltage	V_{RMS}	up to 1500 (upon request)
Creepage	inch (mm)	0.50 (12.7) typical
Terminal sleeves		available for all sizes, increases creepage distance for 600 V applications
Inductance	µH	0.2 to 800 (varies by wattage and resistance)
Non-inductive winding		available
Terminal strength	lb	n/a
Electrical or mechanical customization		available: www.vishay.com/doc?31859

DERATING CURVE



MATERIAL SPECIFICATIONS

Element	copper-nickel, nickel-chrome, iron-chrome-aluminum
Core	electrical porcelain
Potting compound	electrical cement or special high temperature silicone
Standard terminals	stainless steel
Part marking	value, date code, MRC

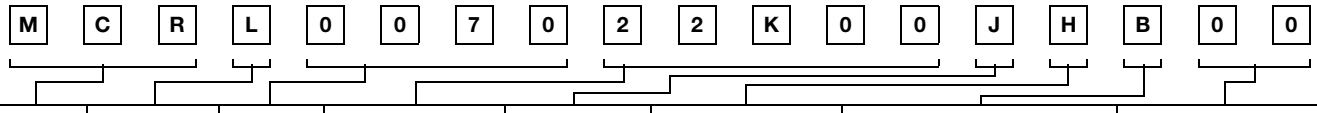
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GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: MCRL007022K00JHB00 (MCRL0070 22K 5 % 1/4SQC B)



MODEL (3 digits)	TYPE (1 digit)	SIZE (4 digits)	VALUE (5 digits)	TOLERANCE (1 digit)	TERMINAL (1 digit)	PACKAGING (1 digit)	SPECIAL (2 digits)
MCR	**L** = Cement	**0045** = 45 W **0100** = 100 W Available sizes: 0045 0070 0100 0125	**R** = Decimal **K** = Thousand **R1500** = 0.15 Ω **1K500** = 1.5 kΩ Check datasheet for available value range	**J** = ± 5.0 % **K** = ± 10 %	**A** = 3/16" lug (3/16L) **B** = A extended length (3/16XL) **H** = 1/4" single quick-connect (1/4SQC)	**B** = Bulk	**00** = Standard **NI** = Non-inductive **SW** = Surge winding

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