Wirewound Resistors, Commercial Power, Printed Circuit Board, Tab Type Terminals

FEATURES

- Variety of core lengths
- Terminals designed for direct mounting into a circuit board to be securely clamped
- Available potted in a ceramic case to increase power dissipation, contact factory by using the e-mail address at the bottom of this page
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL (1)	HISTORICAL MODEL (1)	POWER RATING $P_{25\,°C}$ W	RESISTANCE RANGE Ω	TOLERANCE ± %	WEIGHT (typical) g
PCT4050	PCT-4050	2.0	0.10 to 390	5, 10	0.57
PCT4065	PCT-4065	2.6	0.14 to 560	5, 10	0.59
PCT4085	PCT-4085	3.4	0.20 to 785	5, 10	0.62
PCT4105	PCT-4105	4.2	0.25 to 1.01K	5, 10	0.65
PCT4145	PCT-4145	5.8	0.36 to 1.46K	5, 10	0.71
PCT4185	PCT-4185	7.4	0.47 to 1.91K	5, 10	0.77
PCT4215	PCT-4215	8.6	0.56 to 2.25K	5, 10	0.81

Note

(1) PCT4000 model numbers are calculated from the power rating of 4 W per inch. The last three digits of the model number represent the mounting center spacing of the resistors in inches (decimal is between the first and second digit, mounting center spacing is available between 0.50" [12.70 mm] and 2.15" [54.61 mm]. Example: PCT4150 = 1.50 inches x 4 W per inch = 6 W.

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	PCT4000 RESISTOR CHARACTERISTICS
Power Rating	W	4 per inch
Temperature Coefficient	ppm/°C	± 300 for 1.0 Ω and above; ± 600 below 1.0 Ω
Short Time Overload	-	5 x rated power for 5 s
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	°C	-65 to +375
Terminal Strength	lb	10 minimum

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: PCT405015R00JB14

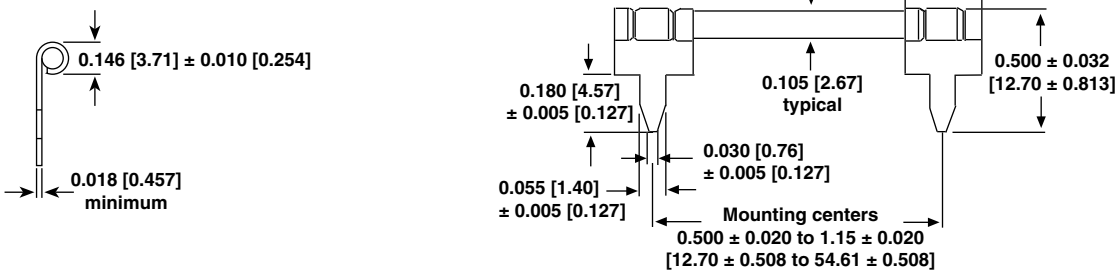
P	C	T	4	0	5	0	1	5	R	0	0	J	B	1	4		

GLOBAL MODEL	VALUE	TOLERANCE	PACKAGING	SPECIAL
(see Standard Electrical Specifications Global Model column for options)	**R** = decimal **K** = thousand **R1500** = 0.15 Ω **1K500** = 1500 Ω	**H** = ± 3.0 % **J** = ± 5.0 % **K** = ± 10.0 %	**B14** = lead (Pb)-free, bulk **B31** = lead (Pb)-free, four layer bulk	(dash number) (up to 2 digits) from **1 to 999** as applicable

Historical Part Numbering example: PCT-4050 15 Ω 5 % B14

PCT-4050	15 Ω	5 %	B14
HISTORICAL MODEL	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING

DIMENSIONS in inches [millimeters]
PCT4000



MATERIAL SPECIFICATIONS

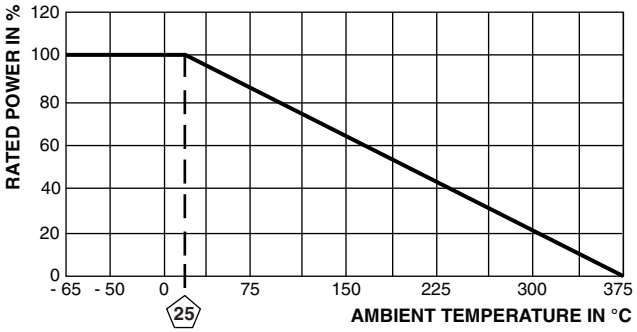
Element: nickel-chrome alloy or copper-nickel alloy, depending on resistance value

Core: woven fiberglass

Terminals: electro tin plated steel

Part Marking: none

DERATING



PERFORMANCE		
TEST	**CONDITIONS OF TEST**	**TEST LIMITS (EIA RS-344)**
Thermal Shock	-55 °C to +275 °C, 5 cycles, 30 min dwell time	± (5.0 % + 0.05 Ω) ΔR
Short Time Overload	5 x rated power for 5 s	± (4.0 % + 0.05 Ω) ΔR
Low Temperature Operation	-65 °C, full rated working voltage for 45 min	± (3.0 % + 0.05 Ω) ΔR
Humidity	75 °C, 90 % to 100 % RH, 240 h	± (5.0 % + 0.05 Ω) ΔR
Load Life	1000 h at rated power, +25 °C, 1.5 h “ON”, 0.5 h “OFF”	± (10.0 % + 0.05 Ω) ΔR
Resistance to Solder Heat	Terminal immersed 3.5 s in molten solder at 1/8" to 3/16" from body	± (4.0 % + 0.05 Ω) ΔR

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.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. 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.