

# PRODUCT SPECIFICATION

SPEC. No.

T-0653-121



## 1. Scope

This specification applies Wire Wound Power Inductors PHC1040-Series-TY to be delivered to user.

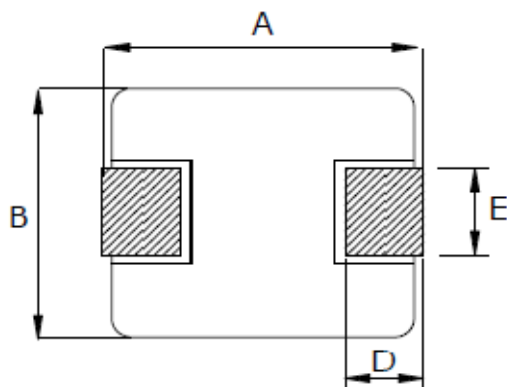
## 2. Product Identification

PHC 1040 - 1R0□ - TY

(1) (2) (3) (4) (5)

- (1) Product name
- (2) Shapes and dimensions
- (3) Inductance  
1R0: 1.0 $\mu$ H
- (4) Tolerance(%)  
M:  $\pm 20\%$
- (5) Taping Type

## 3. Shapes and Dimensions [Dimensions in mm]



A : 11.5 Max. mm  
 B : 10.0 $\pm$ 0.3 mm  
 C : 3.8 $\pm$ 0.2 mm  
 D : 2.0 $\pm$  0.5 mm  
 E : 3.0 $\pm$ 0.5 mm

Drawn by	Checked by	Approved by
<i>Ch</i> May. 11, 2022	<i>Zheny</i> May. 11, 2022	<i>Su</i> May. 11, 2022

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## 4. Electrical Characteristics

### 4-1 Electrical Spec.

Customer Part Number	EMTEK Part No.	Inductance ( $\mu$ H)	Tol.	Rdc (m $\Omega$ )	Saturation Current Isat(A)Typ.	Heat Rating Current Irms(A)Typ.
				Max.		
	PHC1040-R15□-TY	0.15	M	0.65	75.0	45.0
	PHC1040-R22□-TY	0.22	M	1.0	60.0	35.0
	PHC1040-R30□-TY	0.30	M	1.1	45.0	35.0
	PHC1040-R36□-TY	0.36	M	1.2	45.0	30.0
	PHC1040-R47□-TY	0.47	M	1.7	40.0	30.0
	PHC1040-R56□-TY	0.56	M	1.8	33.0	25.0
	PHC1040-R68□-TY	0.68	M	2.4	30.0	23.0
	PHC1040-R80□-TY	0.80	M	2.7	29.0	23.0
	PHC1040-1R0□-TY	1.0	M	3.3	28.0	19.0
	PHC1040-1R5□-TY	1.5	M	4.2	24.0	16.0
	PHC1040-2R2□-TY	2.2	M	7.0	16.5	12.0
	PHC1040-3R3□-TY	3.3	M	11.8	16.0	11.0
	PHC1040-4R7□-TY	4.7	M	20.0	13.0	9.0
	PHC1040-6R8□-TY	6.8	M	25.0	12.0	8.5
	PHC1040-8R2□-TY	8.2	M	27.0	9.0	8.0
	PHC1040-100□-TY	10	M	30.0	8.5	7.8
	PHC1040-150□-TY	15	M	45.0	7.0	6.5
	PHC1040-220□-TY	22	M	66.0	5.5	5.0
	PHC1040-330□-TY	33	M	92.0	4.8	4.4
	PHC1040-470□-TY	47	M	145.0	3.5	3.3
	PHC1040-680□-TY	68	M	195.0	3.0	2.5
	PHC1040-820□-TY	82	M	285.0	2.8	2.3
	PHC1040-101□-TY	100	M	340.0	2.3	2.0

1. Test frequency: 100KHz, 1.0V
2. All test data is referenced to 25°C ambient
3. Irms (A):DC current (A) that will cause an approximate  $\Delta T$  of 40 °C (reference ambient temperature is 25 °C)
4. Isat(A):DC current (A) that will cause L0 to drop approximately 30 %
5. All test data is referenced to 25°C ambient
6. Operating Temperature Range -55°C to +125°C
7. The part number(ambient + temp rise) should not exceed 125°C under the worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.