

Ferrite for Telecommunication

EP cores

EP series

Issue date: April 2011

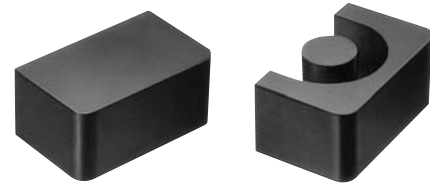
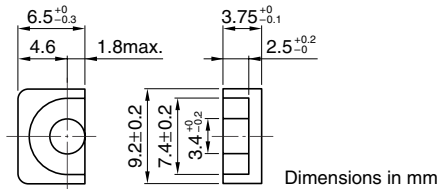
- All specifications are subject to change without notice.
 - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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Ferrite for Telecommunication

EP Series

EP7 CORES

Based on JIS C 2516.



TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N ²) min.	Effective permeability (μ_e)
Without air gap		
H5AEP7-Z	1100	1331
H5C3EP7-Z	4200*	5080*

Measuring conditions:

Coil \varnothing 0.13mm, 2UEW, 100Ts

Frequency 1kHz

Current level 0.5mA

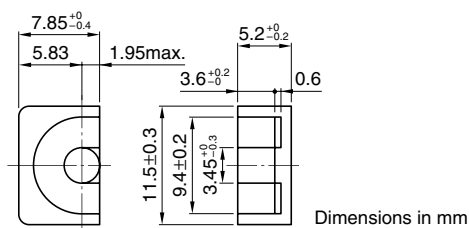
* 100Ts, 10kHz, 10mV (for H5C3 only)

PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C_1	mm ⁻¹	1.52
Effective magnetic path length	ℓ_e	mm	15.7
Effective cross-sectional area	A_e	mm ²	10.3
Effective core volume	V_e	mm ³	162
Cross-sectional center pole area	A_{cp}	mm ²	8.55
Minimum cross-sectional area	$A_{cp \text{ min.}}$	mm ²	8.04
Cross-sectional winding area of core	A_{cw}	mm ²	10.7
Weight (approx.)	g	g	1.4

EP10 CORES

Based on JIS C 2516.



TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N ²) min.	Effective permeability (μ_e)
Without air gap		
H5AEP10-Z	1080	1461
H5C3EP10-Z	3850*	5208*

Measuring conditions:

Coil \varnothing 0.2mm, 2UEW, 100Ts

Frequency 1kHz

Current level 0.5mA

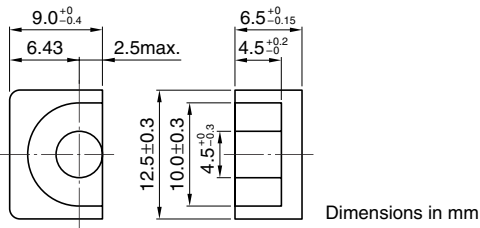
* 100Ts, 10kHz, 10mV (for H5C3 only)

PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C_1	mm ⁻¹	1.7
Effective magnetic path length	ℓ_e	mm	19.2
Effective cross-sectional area	A_e	mm ²	11.3
Effective core volume	V_e	mm ³	217
Cross-sectional center pole area	A_{cp}	mm ²	8.55
Minimum cross-sectional area	$A_{cp \text{ min.}}$	mm ²	7.79
Cross-sectional winding area of core	A_{cw}	mm ²	22.6
Weight (approx.)	g	g	2.8

EP13 CORES

Based on JIS C 2516.



Dimensions in mm

TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N ²) min.	Effective permeability (μe)
Without air gap		
H5AEP13-Z	1700	1677
H5C3EP13-Z	5600*	5526*

Measuring conditions:

Coil ϕ 0.2mm, 2UEW, 100Ts

Frequency 1kHz

Current level 0.5mA

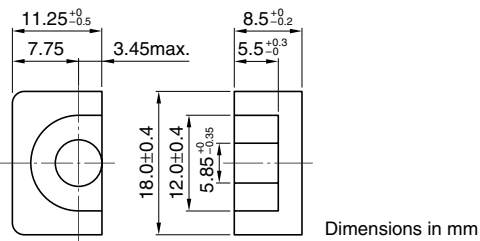
* 100Ts, 10kHz, 10mV (for H5C3 only)

PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C_1	mm ⁻¹	1.24
Effective magnetic path length	ℓ_e	mm	24.2
Effective cross-sectional area	A_e	mm ²	19.5
Effective core volume	V_e	mm ³	472
Cross-sectional center pole area	A_{cp}	mm ²	14.9
Minimum cross-sectional area	$A_{cp \text{ min.}}$	mm ²	13.9
Cross-sectional winding area of core	A_{cw}	mm ²	26
Weight (approx.)	g		5.1

EP17 CORES

Based on JIS C 2516.



Dimensions in mm

TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N ²) min.	Effective permeability (μe)
Without air gap		
H5AEP17-Z	2500	1672
H5C2EP17-Z	8000	5350

Measuring conditions:

Coil ϕ 0.2mm, 2UEW, 100Ts

Frequency 1kHz

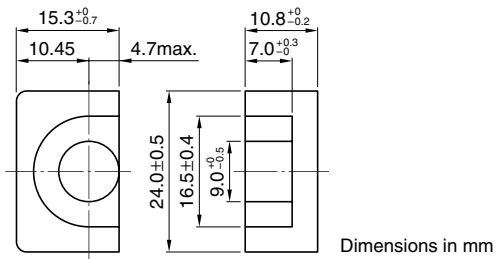
Current level 0.5mA

PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C_1	mm ⁻¹	0.84
Effective magnetic path length	ℓ_e	mm	28.5
Effective cross-sectional area	A_e	mm ²	33.9
Effective core volume	V_e	mm ³	966
Cross-sectional center pole area	A_{cp}	mm ²	25.3
Minimum cross-sectional area	$A_{cp \text{ min.}}$	mm ²	23.8
Cross-sectional winding area of core	A_{cw}	mm ²	33.8
Weight (approx.)	g		11.8

EP20 CORES

Based on JIS C 2516.



TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N ²) min.	Effective permeability (μ_e)
Without air gap		
H5AEP20-Z	4200	1698
H5C2EP20-Z	13500	5457
PC40EP20-Z	3200	1294

Measuring conditions:
Coil ϕ 0.35mm, 2UEW, 100Ts
Frequency 1kHz
Current level 0.5mA

PARAMETER

Core factor	C ₁	mm ⁻¹	0.508
Effective magnetic path length	ℓ_e	mm	39.8
Effective cross-sectional area	A _e	mm ²	78
Effective core volume	V _e	mm ³	312
Cross-sectional center pole area	A _{cp}	mm ²	60.1
Minimum cross-sectional area	A _{cp min.}	mm ²	56.7
Cross-sectional winding area of core	A _{cw}	mm ²	55.4
Weight (approx.)	g		27.6