

# Ferrite for Telecommunication

## SMD cores

### EPC/ER/EE/EEM series

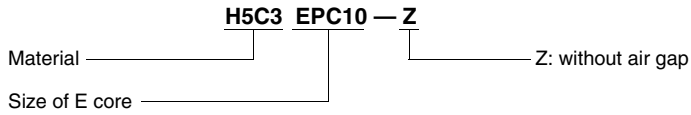
Issue date: April 2011

- 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

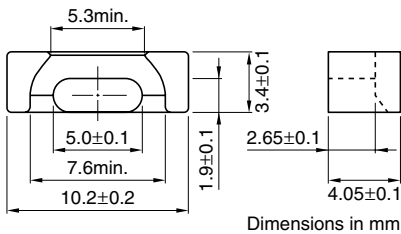
## SMD Cores

### ORDERING CODE SYSTEMS



## EPC Series

### EPC10 CORES



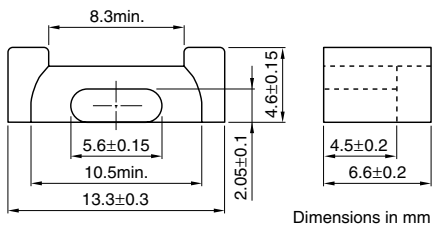
### TYPICAL CHARACTERISTICS

Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3EPC10-Z</b>	2660 min.

### PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C <sub>1</sub>	mm <sup>-1</sup>	1.89
Effective magnetic path length	ℓ <sub>e</sub>	mm	17.8
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	9.39
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	167
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	8.73
Minimum cross-sectional area	A <sub>cp min.</sub>	mm <sup>2</sup>	8.13
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	7.69
Weight (approx.)	g		1.1

### EPC13 CORES



### TYPICAL CHARACTERISTICS

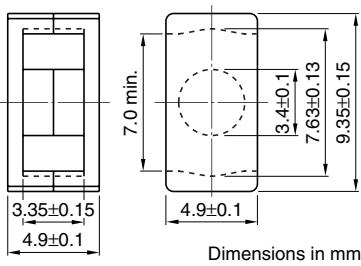
Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3EPC13-Z</b>	2450 min.

### PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C <sub>1</sub>	mm <sup>-1</sup>	2.46
Effective magnetic path length	ℓ <sub>e</sub>	mm	30.6
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	12.5
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	382
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	10.6
Minimum cross-sectional area	A <sub>cp min.</sub>	mm <sup>2</sup>	9.71
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	23.0
Weight (approx.)	g		2.1

## ER Series

### ER9.5/5 CORES



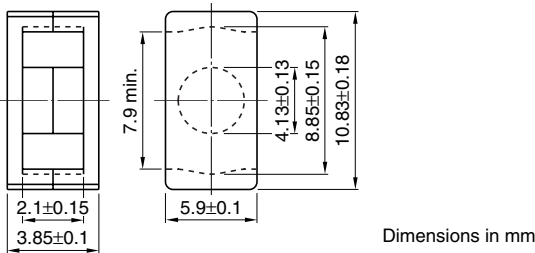
#### TYPICAL CHARACTERISTICS

Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3ER9.5/5-Z</b>	3500 min.

#### PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C <sub>1</sub>	mm <sup>-1</sup>	1.67
Effective magnetic path length	ℓ <sub>e</sub>	mm	14.2
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	8.47
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	120
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	9.08
Minimum cross-sectional area	A <sub>cp min.</sub>	mm <sup>2</sup>	8.55
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	7.1
Weight (approx.)	g		0.6

### ER11/3.9 CORES



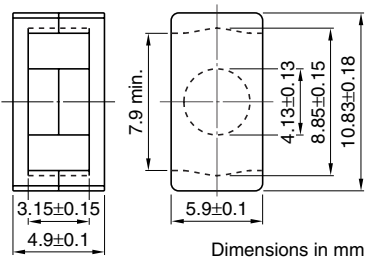
#### TYPICAL CHARACTERISTICS

Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3ER11/3.9-Z</b>	4900 min.

#### PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C <sub>1</sub>	mm <sup>-1</sup>	1.08
Effective magnetic path length	ℓ <sub>e</sub>	mm	12.6
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	11.7
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	147
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	13.4
Minimum cross-sectional area	A <sub>cp min.</sub>	mm <sup>2</sup>	12.6
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	4.96
Weight (approx.)	g		0.8

## ER11/5 CORES



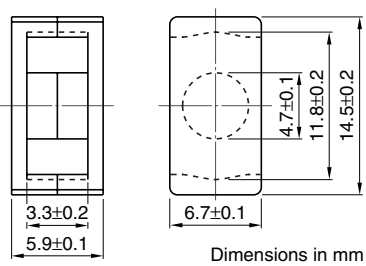
### TYPICAL CHARACTERISTICS

Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3ER11/5-Z</b>	4760 min.

### PARAMETER

Core factor	$C_1$	mm <sup>-1</sup>	1.23
Effective magnetic path length	$\ell_e$	mm	14.7
Effective cross-sectional area	$A_e$	mm <sup>2</sup>	11.9
Effective core volume	$V_e$	mm <sup>3</sup>	174
Cross-sectional center pole area	$A_{cp}$	mm <sup>2</sup>	13.4
Minimum cross-sectional area	$A_{cp \text{ min.}}$	mm <sup>2</sup>	12.6
Cross-sectional winding area of core	$A_{cw}$	mm <sup>2</sup>	7.44
Weight (approx.)	$g$		1.0

## ER14.5/6 CORES



### TYPICAL CHARACTERISTICS

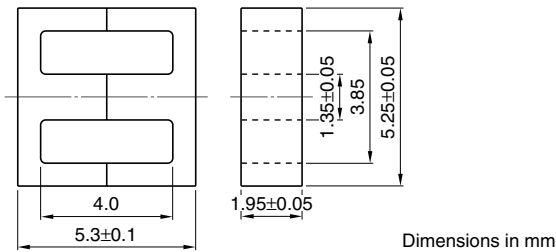
Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3ER14.5/6-Z</b>	5950 min.

### PARAMETER

Core factor	$C_1$	mm <sup>-1</sup>	1.08
Effective magnetic path length	$\ell_e$	mm	19.0
Effective cross-sectional area	$A_e$	mm <sup>2</sup>	17.6
Effective core volume	$V_e$	mm <sup>3</sup>	333
Cross-sectional center pole area	$A_{cp}$	mm <sup>2</sup>	17.3
Minimum cross-sectional area	$A_{cp \text{ min.}}$	mm <sup>2</sup>	16.6
Cross-sectional winding area of core	$A_{cw}$	mm <sup>2</sup>	11.7
Weight (approx.)	$g$		1.8

## EE Series

### EE5 CORES



Dimensions in mm

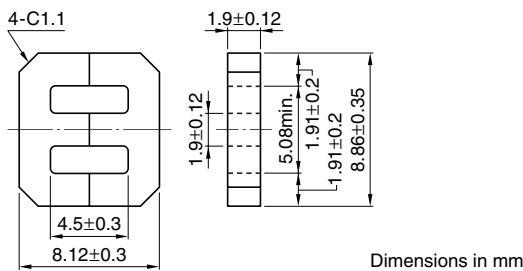
#### TYPICAL CHARACTERISTICS

Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3EE5-Z</b>	980 min.

#### PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C <sub>1</sub>	mm <sup>-1</sup>	4.72
Effective magnetic path length	ℓ <sub>e</sub>	mm	12.6
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	2.67
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	33.6
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	2.63
Minimum cross-sectional area	A <sub>cp min.</sub>	mm <sup>2</sup>	2.47
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	5.0
Weight (approx.)	g		0.2

### EE8.9/8 CORES



Dimensions in mm

#### TYPICAL CHARACTERISTICS

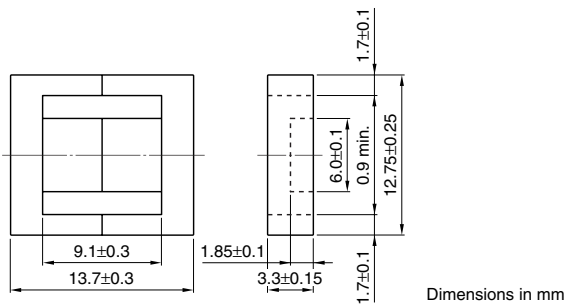
Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3EE8.9/8-Z</b>	2000 min.

#### PARAMETER

Parameter	Symbol	Unit	Value
Core factor	C <sub>1</sub>	mm <sup>-1</sup>	3.15
Effective magnetic path length	ℓ <sub>e</sub>	mm	15.6
Effective cross-sectional area	A <sub>e</sub>	mm <sup>2</sup>	4.96
Effective core volume	V <sub>e</sub>	mm <sup>3</sup>	77.4
Cross-sectional center pole area	A <sub>cp</sub>	mm <sup>2</sup>	3.61
Minimum cross-sectional area	A <sub>cp min.</sub>	mm <sup>2</sup>	3.17
Cross-sectional winding area of core	A <sub>cw</sub>	mm <sup>2</sup>	7.07
Weight (approx.)	g		0.6

## EEM Series

### EEM12.7/13.7 CORES



#### TYPICAL CHARACTERISTICS

Part No.	AL-value(nH/N <sup>2</sup> ) [10kHz, 10mV, 100Ts]
<b>H5C3EEM12.7/13.7-Z</b>	3000 min.

#### PARAMETER

Parameter	Symbol	Unit	Value
Core factor	$C_1$	mm <sup>-1</sup>	2.27
Effective magnetic path length	$\ell_e$	mm	27.3
Effective cross-sectional area	$A_e$	mm <sup>2</sup>	12.0
Effective core volume	$V_e$	mm <sup>3</sup>	328
Cross-sectional center pole area	$A_{cp}$	mm <sup>2</sup>	11.1
Minimum cross-sectional area	$A_{cp \text{ min.}}$	mm <sup>2</sup>	10.3
Cross-sectional winding area of core	$A_{cw}$	mm <sup>2</sup>	15.2
Weight (approx.)	$g$		1.9