Ferrite for Telecommunication

RM cores

RM 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.

Ferrite for Telecommunication
RM Series

RM cores are popularly used in place of pot cores where high-density mounting is required. RM cores follow the recommendations of IEC publication 60431.
As shown is figure, the RM core effectively utilizes the mounting area on the PC-board. The bobbin is designed for convenient PC-board mounting.

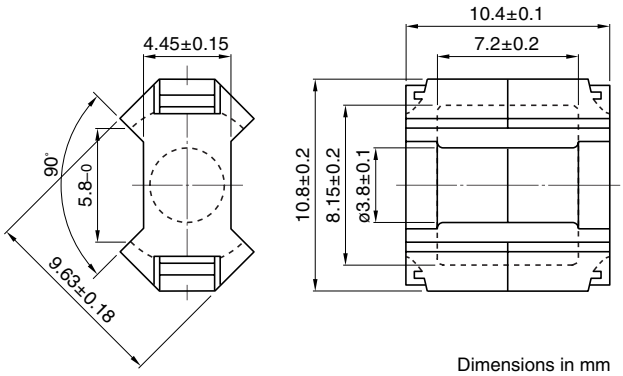
ORDERING CODE SYSTEMS

H5A RM6 Z — 1 2

- H5A: Material
- RM6: Size of RM core
- Z: without air gap
- 1: Type of RM core
- 2: Number of lead slot

RM4 CORES

Based on IEC Publication 60431, DIN 41980 and JIS C 2516.



Dimensions in mm

TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N²)	Effective permeability(μe)
Without air gap		
H5ARM4Z-12	1240±25%	1599
H5C2RM4Z-12	4950±30%	6381[at 32.4mT]
	3000+40/–30%	3870*[at 0.5mT]

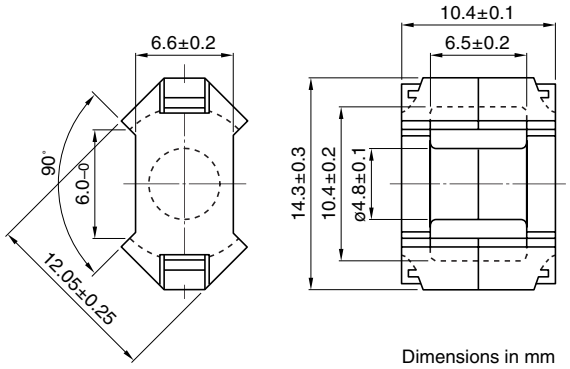
* Reference specification when 0.5mT is applied to cores.
Measuring conditions:
Coil ø0.18mm, 2UEW, 100Ts
Frequency 1kHz
Current level 0.5mA

PARAMETER

Core factor	C1	mm⁻¹	1.62
Effective magnetic path length	ℓe	mm	22.7
Effective cross-sectional area	Ae	mm²	14.0
Effective core volume	Ve	mm³	318
Cross-sectional center pole area	Acp	mm²	11.3
Minimum cross-sectional area	Acp min.	mm²	10.7
Cross-sectional winding area of core	Acw	mm²	15.6
Weight (approx.)		g	1.7

RM5 CORES

Based on IEC Publication 60431, DIN 41980 and JIS C 2516.



Dimensions in mm

TYPICAL CHARACTERISTICS

Part No.	A_L-value (nH/N²)	Effective permeability(μe)
Without air gap		
H5ARM5Z-12	2220±25%	1661
H5C3RM5Z-12	7700 min.*	5760 min.*

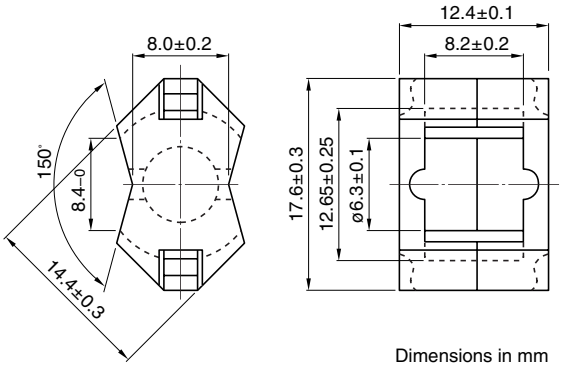
Measuring conditions:
Coil ø0.20mm, 2UEW, 100Ts
Frequency 1kHz
Current level 0.5mA
* 100Ts, 10kHz, 10mV (for H5C3 only)

PARAMETER

Core factor	C_1	mm^{-1}	0.940
Effective magnetic path length	ℓe	mm	22.4
Effective cross-sectional area	Ae	mm^2	23.7
Effective core volume	Ve	mm^3	530
Cross-sectional center pole area	Acp	mm^2	18.1
Minimum cross-sectional area	Acp min.	mm^2	17.3
Cross-sectional winding area of core	Acw	mm^2	18.2
Weight (approx.)		g	3.0

RM6 CORES

Based on IEC Publication 60431, DIN 41980 and JIS C 2516.



Dimensions in mm

TYPICAL CHARACTERISTICS

Part No.	A_L-value (nH/N²)	Effective permeability (μe)
Without air gap		
H5ARM6Z-12	3300±25%	2258
H5C3RM6Z-12	9100 min.*	5648 min.*

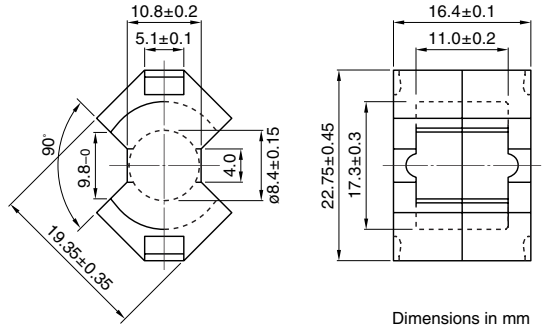
Measuring conditions:
Coil ø0.26mm, 2UEW, 100Ts
Frequency 1kHz
Current level 0.5mA
* 100Ts, 10kHz, 10mV (for H5C3 only)

PARAMETER

Core factor	C_1	mm^{-1}	0.781
Effective magnetic path length	ℓe	mm	28.6
Effective cross-sectional area	Ae	mm^2	36.6
Effective core volume	Ve	mm^3	1050
Cross-sectional center pole area	Acp	mm^2	31.2
Minimum cross-sectional area	Acp min.	mm^2	30.2
Cross-sectional winding area of core	Acw	mm^2	26.0
Weight (approx.)		g	5.5

RM8 CORES

Based on IEC Publication 60431, DIN 41980 and JIS C 2516.



Dimensions in mm

TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N²)	Effective permeability (μe)
Without air gap		
H5ARM8Z-12	4300±25%	2019
H5C2RM8Z-12	17100±30%	8029[at 20.3mT]
	15200+40/–30%	7137*[at 0.5mT]

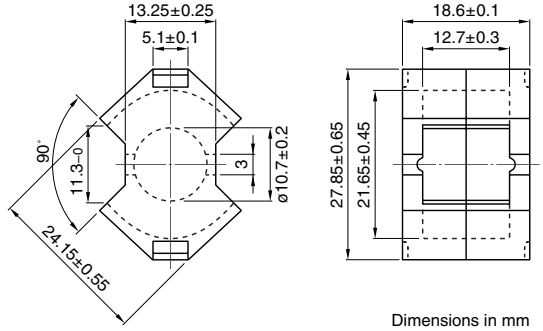
* Reference specification when 0.5mT is applied to cores.
Measuring conditions:
Coil ø0.40mm, 2UEW, 100Ts
Frequency 1kHz
Current level 0.5mA

PARAMETER

Core factor	C1	mm⁻¹	0.594
Effective magnetic path length	ℓe	mm	38.0
Effective cross-sectional area	Ae	mm²	64.0
Effective core volume	Ve	mm³	2430
Cross-sectional center pole area	Acp	mm²	55.4
Minimum cross-sectional area	Acp min.	mm²	53.3
Cross-sectional winding area of core	Acw	mm²	48.9
Weight (approx.)		g	13

RM10 CORES

Based on IEC Publication 60431, DIN 41980 and JIS C 2516.



Dimensions in mm

TYPICAL CHARACTERISTICS

Part No.	AL-value (nH/N²)	Effective permeability (μe)
Without air gap		
H5ARM10Z-12	6220±25%	2475
H5C2RM10Z-12	20900±30%	8316[at 17.8mT]
	17500+40/–30%	6963*[at 0.5mT]

* Reference specification when 0.5mT is applied to cores.
Measuring conditions:
Coil ø0.40mm, 2UEW, 100Ts
Frequency 1kHz
Current level 0.5mA

PARAMETER

Core factor	C1	mm⁻¹	0.450
Effective magnetic path length	ℓe	mm	44.0
Effective cross-sectional area	Ae	mm²	98.0
Effective core volume	Ve	mm³	4310
Cross-sectional center pole area	Acp	mm²	89.9
Minimum cross-sectional area	Acp min.	mm²	86.6
Cross-sectional winding area of core	Acw	mm²	69.5
Weight (approx.)		g	23