



Mn-Zn

Ferrite Cores for Switching Power Supplies

SMD series

EE
ER
EEM



REMINDERS FOR USING THESE PRODUCTS

Please be sure to read this manual thoroughly before using the products.

The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

When using the products for specific purposes, please first make confirmations in areas such as safety, reliability, and quality.

Please understand that we are not in a position to be held responsible for any damage or the like caused by any use exceeding the range or conditions of this specification sheet or by any use in the specific applications.

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|---|--|
| (1) Aerospace/Aviation equipment | (8) Public information-processing equipment |
| (2) Transportation equipment (electric trains, ships, etc.) | (9) Military equipment |
| (3) Medical equipment | (10) Electric heating apparatus, burning equipment |
| (4) Power-generation control equipment | (11) Disaster prevention/crime prevention equipment |
| (5) Atomic energy-related equipment | (12) Safety equipment |
| (6) Seabed equipment | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment | |

When using this product in general-purpose standard applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc to ensure higher safety.

Ferrite Cores for Switching Power Supplies

Product compatible with RoHS directive
Halogen-free

Overview of the SMD Series

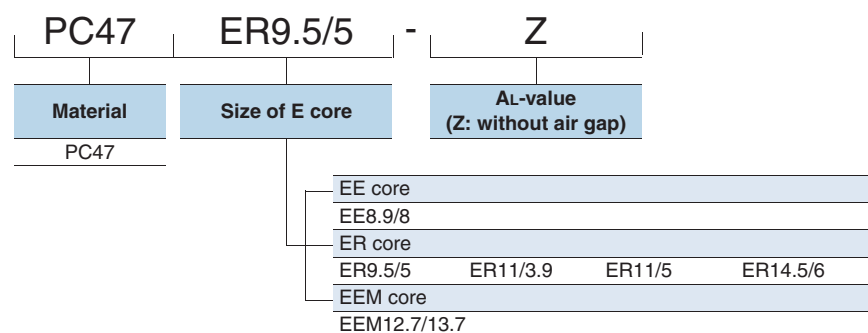
FEATURES

- Small shapes for surface mounting.
- The EE and EEM Cores are horizontal mounted types.
- The ER Cores are a vertical mounted type.

APPLICATION

Low profile power supplies, Transformers and Coils for DC/DC Converters

PART NUMBER CONSTRUCTION



RANGE OF USE AND STORAGE TEMPERATURE

Temperature range	
Operating temperature (°C)	Storage temperature (°C)
-30 to +105	-30 to +85

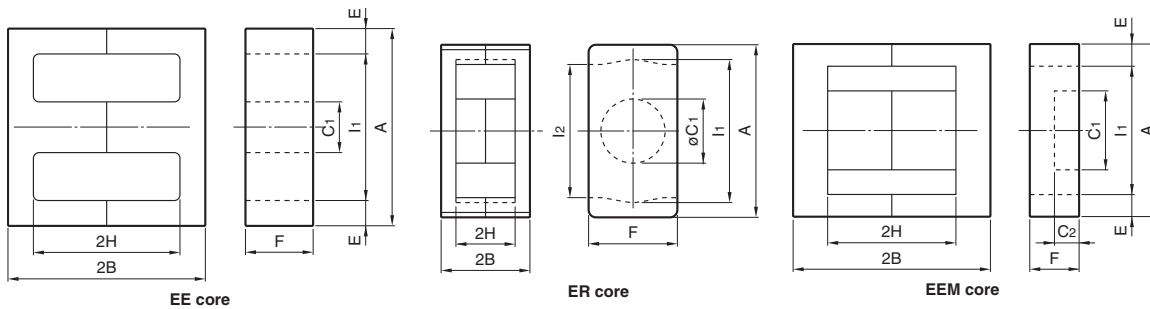
- RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. <http://www.tdk.co.jp/rohs/>
- Halogen-free: Indicates that Cl content is less than 900ppm, Br content is less than 900ppm, and that the total Cl and Br content is less than 1500ppm.

• All specifications are subject to change without notice.

Mn-Zn EE, ER, EEM Cores



SHAPES AND DIMENSIONS



PC47	EE8.9/8	Z
Material	Size of E core	AL-value (Z: without air gap)

Part No.	Core	Dimensions (mm)								
		A	2B	C ₁	C ₂	E	F	2H	l ₁	l ₂
PC47EE8.9/8-Z	EE	8.86±0.20	8.0±0.3	1.90±0.12		1.91±0.20	1.90±0.12	4.5±0.3	5.08 min.	
PC47ER9.5/5-Z	ER	9.35±0.15	4.9±0.1	3.4±0.1			4.9±0.1	3.35±0.15	7.63±0.13	7.0 min.
PC47ER11/3.9-Z	ER	10.83±0.18	3.85±0.10	4.13±0.13			5.9±0.1	2.10±0.15	8.85±0.15	7.9 min.
PC47ER11/5-Z	ER	10.83±0.18	4.9±0.1	4.13±0.13			5.9±0.1	3.15±0.15	8.85±0.15	7.9 min.
PC47ER14.5/6-Z	ER	14.5±0.2	5.9±0.1	4.7±0.1			6.7±0.1	3.3±0.2	11.8±0.2	11.8±0.2
PC47EEM12.7/13.7-Z	EEM	12.75±0.25	13.7±0.3	6.0±0.1	1.85±0.10	1.7±0.1	3.30±0.15	9.1±0.3	9.0 min.	

Part No.	Effective parameter					Electrical characteristics	
	Core factor C ₁ (mm ⁻¹)	Effective cross-sectional area A _e (mm ²)	Effective magnetic path length ℓ _e (mm)	Effective core volume V _e (mm ³)	Weight (g)	AL-value (nH/N ²) 1kHz 0.5mA 100Ts Without air gap	With air gap
PC47EE8.9/8-Z	3.15	4.96	15.6	77.4	0.6	480±25%	
PC47ER9.5/5-Z	1.68	8.47	14.2	120	0.6	610 min.	63±5% 100±7%
PC47ER11/3.9-Z	1.08	11.7	12.6	147	0.8	1040 min.	63±5% 100±7%
PC47ER11/5-Z	1.24	11.9	14.7	175	1.0	870 min.	63±5% 100±7%
PC47ER14.5/6-Z	1.08	17.6	19.0	334	1.8	1280 min.	100±5% 160±7%
PC47EEM12.7/13.7-Z	2.28	12.0	27.3	328	1.9	820±25%	40±5% 63±7%

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