ACME Electronics Corporation
越峯電子材料股份有限公司

USI Group



Product Catalogue

Multi-gap Core Solutions

Ferrite Core / Composite Core

Always Committed to Manufacturing Excellence

bsi ISO 9001 Quality Management Systems CERTIFIED | ISO 14001 Environmental Management CERTIFIED | IATF 16949 Automotive Quality Management CERTIFIED | ISO 50001 Energy Management CERTIFIED



COMPANY BRIEF

ACME Electronics Corporation, a subsidiary of USI Corporation, has been developed into one of the world's leading manufacturers of soft magnetic products since her establishment. Incorporated in 1991 and listed in Taiwan OTC market in 2005, ACME with her headquarter in Taipei possesses four manufacturing sites where one is in Taiwan, one in Malaysia, and two in China.

OUR PRODUCTS

ACME provides **Multi-gap Ferrite Core** and **Multi-gap Composite Core** solutions for high-current and high-power applications. Flexible air-gap and inductance configurations are available to meet various power conversion requirements.

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2026

Why Multi-Gap?

A smarter core design for higher performance in demanding powder applications.



Reduced Fringing Flux

Distributed air gaps minimize the influence of fringing flux on nearby windings.



Lower Temperature Rise

Helps reduce localized winding loss and hot spots, improving thermal performance.



Lower AC Loss

Reduced proximity effect leads to lower AC loss and higher efficiency in high-current applications.

Better thermal performance. Lower loss. Higher reliability.

Standard Product Series

A comprehensive lineup of multi-gap ferrite and composite cores to meet various power conversion requirements.

PQH Series
Multi-gap Ferrite Core

Wide material options and A_L values for high-current and high-power applications.

Size	Material	A_L Options (nH/N²)
PQH30/30	P453	76 / 116 / 165
	P53	75 / 113 / 159
	P61	74 / 112 / 156
PQH40/40	P453	95 / 146 / 207
	P53	93 / 141 / 198
	P61	92 / 139 / 194
PQH50/50	P453	115 / 161 / 249
	P53	113 / 157 / 240
	P61	112 / 155 / 236

PQH Composite Series
Multi-gap Composite Core

Composite material with distributed air gaps, ideal for PFC choke and high-current power inductors.

Size	Material	A_L Options (nH/N²)
PQH30/30	P453 / AG060	66 / 94 / 123
PQH40/40	P453 / AG060	80 / 112 / 144
PQH50/50	P453 / AG060	100 / 118 / 184

EEH Series
Multi-gap Ferrite Core

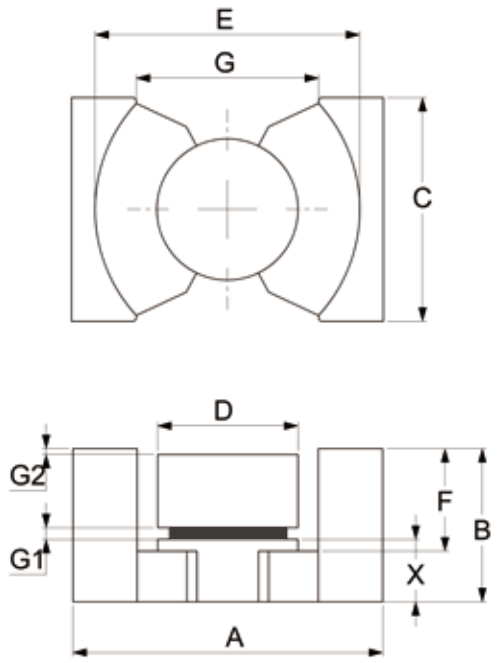
Designed for high-power applications with excellent inductance stability.

Size	Material	A_L Options (nH/N²)
EEH42/42	P453	123 / 190 / 271
	P53	120 / 184 / 258
	P61	86 / 119 / 181
EEH55/55	P453	178 / 277 / 396
	P53	173 / 266 / 373
	P61	124 / 171 / 260
EEH65/65	P453	262 / 409 / 587
	P53	254 / 390 / 549
	P61	180 / 250 / 381

Customized core geometries, sizes, air gaps and A_L values are also available.

PQ Series

Core Dimensions



	PQ30/30	PQ40/40	PQ50/50
A	30.00 ± 0.50	40.64 ± 0.60	50.00 ± 0.70
B	15.00 ± 0.15	20.00 ± 0.15	25.00 ± 0.20
C	23.00 ± 0.50	28.00 ± 0.50	32.00 ± 0.60
D	13.30 ± 0.30	15.00 ± 0.30	20.00 ± 0.35
E	25.50 ± 0.50	36.80 ± 0.60	44.00 ± 0.70
F	11.70 ± 0.15	14.85 ± 0.15	18.00 ± 0.20
G	20.70 ± 0.50	29.00 ± 0.50	32.50 ± 0.70
X	3.60 ± 0.20	5.45 ± 0.20	9.30 ± 0.20

Application Fields

Multi-gap Ferrite Core

1. OBC
2. DC/DC Converter
3. Solar Inverter
4. UPS
5. Industrial SMPS
6. Telecom/Server SMPS

Multi-gap Composite Core

1. PFC Choke
2. High Inductance
3. High Current Power Inductor

Characteristics

	PQ30/30	PQ40/40	PQ50/50
Σ L/A	0.548 mm^{-1}	0.511 mm^{-1}	0.361 mm^{-1}
L_e	70.6 mm	96.8 mm	118.4 mm
A_e	128.8 mm^2	189.5 mm^2	328.3 mm^2
A_{min}	96.8 mm^2	172.3 mm^2	310.9 mm^2
V_e	9094mm^3	18350mm^3	38860 mm^3

Material	Part no.	G1(mm)	G2 (mm)	Inductance Factor A_L(nH/N^2)
P453	P453PQH30/30G165	0.40	0.20	165 ±10%
	P453PQH30/30G116	0.60	0.30	116 ±10%
	P453PQH30/30G76	1.00	0.50	76 ±10%
★ P453 AG060	P453PQH30/30G123-AG	0.40	0.20	123 ±10%
	P453PQH30/30G94-AG	0.60	0.30	94 ±10%
	P453PQH30/30G66-AG	1.00	0.50	66 ±10%
P53	P53PQH30/30G159	0.40	0.20	159 ±10%
	P53PQH30/30G113	0.60	0.30	113 ±10%
	P53PQH30/30G75	1.00	0.50	75 ±10%
P61	P61PQH30/30G156	0.40	0.20	156 ±10%
	P61PQH30/30G112	0.60	0.30	112 ±10%
	P61PQH30/30G74	1.00	0.50	74 ±10%

Custom A_L values, air gaps, and materials are available upon request.

★ Multi-gap Composite Core

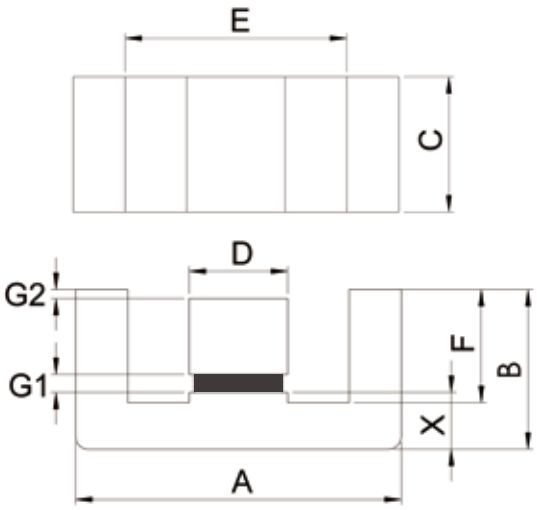
Material	Part no.	G1(mm)	G2 (mm)	Inductance Factor A_L(nH/N²)
P453	P453PQH40/40G207	0.40	0.20	207 ±10%
	P453PQH40/40G146	0.60	0.30	146 ±10%
	P453PQH40/40G95	1.00	0.50	95 ±10%
★ P453 AG060	P453PQH40/40G144-AG	0.40	0.20	144 ±10%
	P453PQH40/40G112-AG	0.60	0.30	112 ±10%
	P453PQH40/40G80-AG	1.00	0.50	80 ±10%
P53	P53PQH40/40G198	0.40	0.20	198 ±10%
	P53PQH40/40G141	0.60	0.30	141 ±10%
	P53PQH40/40G93	1.00	0.50	93 ±10%
P61	P61PQH40/40G194	0.40	0.20	194 ±10%
	P61PQH40/40G139	0.60	0.30	139 ±10%
	P61PQH40/40G92	1.00	0.50	92 ±10%
P453	P453PQH50/50G249	0.60	0.30	249 ±10%
	P453PQH50/50G161	1.00	0.50	161 ±10%
	P453PQH50/50G115	1.50	0.75	115 ±10%
★ P453 AG060	P453PQH50/50G184-AG	0.60	0.30	184 ±10%
	P453PQH50/50G132-AG	1.00	0.50	132 ±10%
	P453PQH50/50G100-AG	1.50	0.75	100 ±10%
P53	P53PQH50/50G240	0.60	0.30	240 ±10%
	P53PQH50/50G157	1.00	0.50	157 ±10%
	P53PQH50/50G113	1.50	0.75	113 ±10%
P61	P61PQH50/50G236	0.60	0.30	236 ±10%
	P61PQH50/50G155	1.00	0.50	155 ±10%
	P61PQH50/50G112	1.50	0.75	112 ±10%

Custom A_L values, air gaps, and materials are available upon request.

★ Multi-gap Composite Core

EE Series

Core Dimensions



	EE42/42	EE55/55	EE65/65
A	42.15 ± 0.70	55.15 ± 1.05	65.15 ± 1.20
B	21.00 ± 0.20	27.50 ± 0.30	32.50 ± 0.30
C	19.70 ± 0.40	20.75 ± 0.30	27.10 ± 0.40
D	11.95 ± 0.25	16.95 ± 0.25	19.65 ± 0.35
E	29.00 min	38.00 min	44.80 min
F	15.15 ± 0.20	18.90 ± 0.30	22.55 ± 0.30
X	6.15 ± 0.20	8.90 ± 0.30	10.25 ± 0.30

Application Fields

Multi-gap Ferrite Core

1. High-Power PFC
2. AI Server PSU
3. Telecom Power
4. Industrial Power
5. Solar / ESS
6. EV Charging

Characteristics:

	PQ30/30	PQ40/40	PQ50/50
Σ L/A	0.414 mm^{-1}	0.349 mm^{-1}	0.271 mm^{-1}
L_e	97.2 mm	123.5 mm	146.5 mm
A_e	234.9 mm^2	354.2 mm^2	541.3 mm^2
A_{min}	230.4 mm^2	351.1 mm^2	531.9 mm^2
V_e	22858 mm^3	43760 mm^3	79329 mm^3

Material	Part no.	G1(mm)	G2 (mm)	Inductance Factor A_L (nH/N^2)
P453	P453EEH42/42G271	0.40	0.20	271 ±10%
	P453EEH42/42G190	0.60	0.30	190 ±10%
	P453EEH42/42G123	1.00	0.50	123 ±10%
P53	P53EEH42/42G258	0.40	0.20	258 ±10%
	P53EEH42/42G184	0.60	0.30	184 ±10%
	P53EEH42/42G120	1.00	0.50	120 ±10%
P61	P61EEH42/42G181	0.40	0.20	181 ±10%
	P61EEH42/42G119	0.60	0.30	119 ±10%
	P61EEH42/42G86	1.00	0.50	86 ±10%

Custom A_L values, air gaps, and materials are available upon request.

Material	Part no.	G1(mm)	G2 (mm)	Inductance Factor A_L (nH/N^2)
P453	P453EEH55/55G396	0.40	0.20	396 ±10%
	P453EEH55/55G277	0.60	0.30	277 ±10%
	P453EEH55/55G178	1.00	0.50	178 ±10%
P53	P53EEH55/55G373	0.40	0.20	373 ±10%
	P53EEH55/55G266	0.60	0.30	266 ±10%
	P53EEH55/55G173	1.00	0.50	173 ±10%
P61	P61EEH55/55G260	0.40	0.20	260 ±10%
	P61EEH55/55G171	0.60	0.30	171 ±10%
	P61EEH55/55G124	1.00	0.50	124 ±10%
P453	P453EEH65/65G587	0.60	0.30	587 ±10%
	P453EEH65/65G409	1.00	0.50	409 ±10%
	P453EEH65/65G262	1.50	0.75	262 ±10%
P53	P53EEH65/65G549	0.60	0.30	549 ±10%
	P53EEH65/65G390	1.00	0.50	390 ±10%
	P53EEH65/65G254	1.50	0.75	254 ±10%
P61	P61EEH65/65G381	0.60	0.30	381 ±10%
	P61EEH65/65G250	1.00	0.50	250 ±10%
	P61EEH65/65G180	1.50	0.75	180 ±10%

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