



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

Multi-gap Ferrite Core

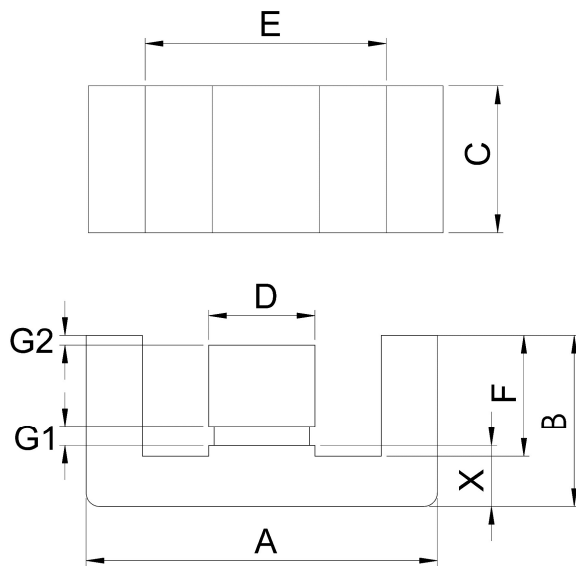
P53 EEH42/42

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Multi-gap Ferrite Core

EEH42/42



Core dimensions:

A	42.15 ± 0.70
B	21.00 ± 0.20
C	19.70 ± 0.40
D	11.95 ± 0.25
E	29.00 min
F	15.15 ± 0.20
X	6.15 ± 0.20

Application Fields:

1 High-Power PFC

2 AI Server PSU

3 Telecom Power

4 Industrial Power

5 Solar /ESS

6 EV Charging

Characteristics:

$\Sigma L/A$	L_e	A_e	A_{min}	V_e	Wt/set
0.414 mm ⁻¹	97.2 mm	234.9 mm ²	230.4 mm ²	22858 mm ³	114 g

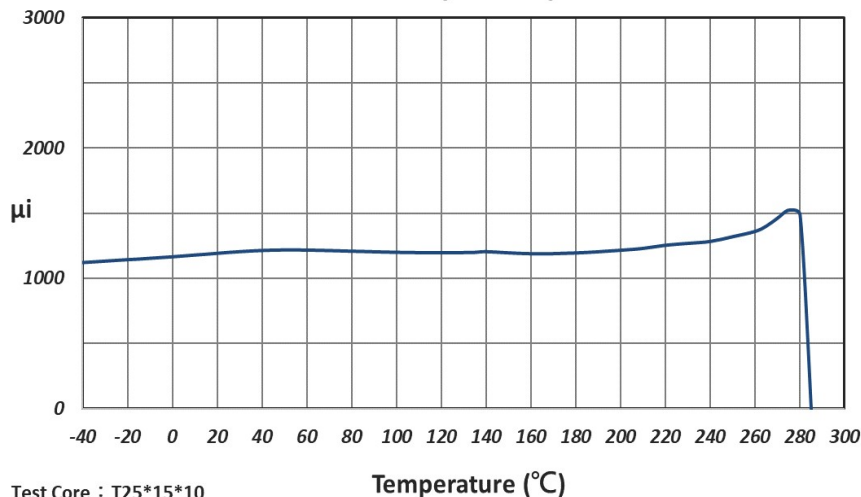
Material	Part no.	G1 (mm)	G2 (mm)	Inductance Factor A_L (nH/N ²)
P53	P53EEH42/42G258	0.40	0.20	258 ±10%
	P53EEH42/42G184	0.60	0.30	184 ±10%
	P53EEH42/42G120	1.00	0.50	120 ±10%

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

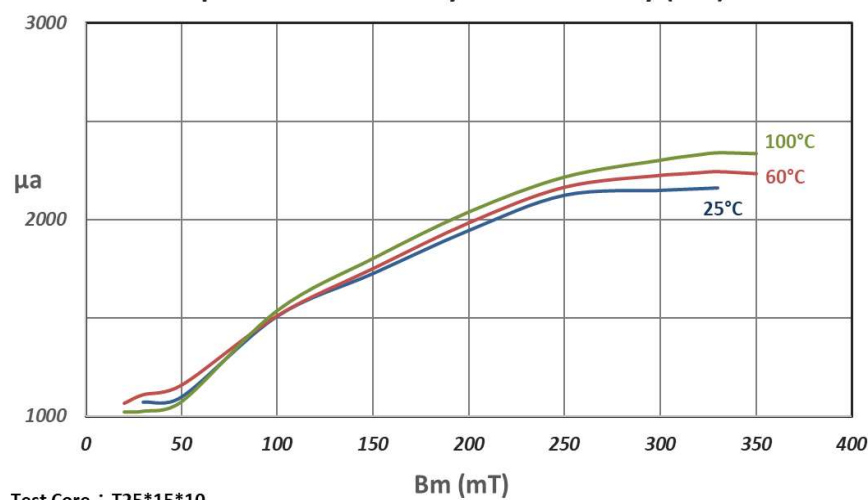
Material properties:

	Symbol	Unit	Measuring Conditions			P53
			Freq.	Flux den.	Temp.	
Initial Permeability	μ_i		10 kHz	0.25 mT	25°C	1900 ±25%
Amplitude Permeability	μ_a		25 kHz	200 mT	25°C	> 1900
					100°C	> 2000
Power Loss	Pv	kW/m ³	300 kHz	100 mT	25°C	350
					100°C	310
			500 kHz	50 mT	25°C	80
					100°C	60
			500 kHz	100 mT	25°C	650
					100°C	650
			1000 kHz	50 mT	25°C	300
					100°C	300
Saturation Flux Density	Bs	mT	10 kHz	1200 A/m	25°C	515
					100°C	420
Remanence	Br	mT	10 kHz	1200 A/m	25°C	180
					100°C	120
Coercivity	Hc	A/m	10 kHz	1200 A/m	25°C	38
					100°C	33
Hysteresis Material Constant	η_B	10 ⁻⁶ /mT	10 kHz	1.5-3.0 mT	25°C	< 1
Disaccommodation Factor	DF	10 ⁻⁶	10 kHz	< 0.25 mT	25°C	< 2
Curie Temperature	Tc	°C				> 280
Resistivity	ρ	Ωm				10
Density	d	g/cm ³				4.8

Initial Permeability vs Temperature



Amplitude Permeability vs Flux Density (Bm)



Complex Permeability vs Frequency

