



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

Multi-gap Ferrite Core

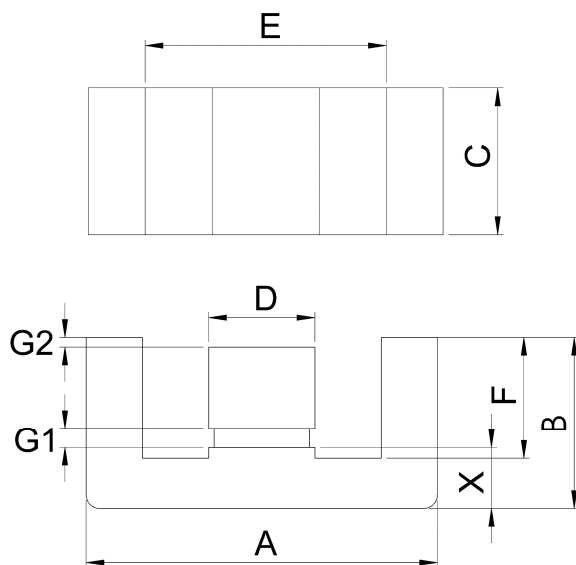
P453 EEH42/42

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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

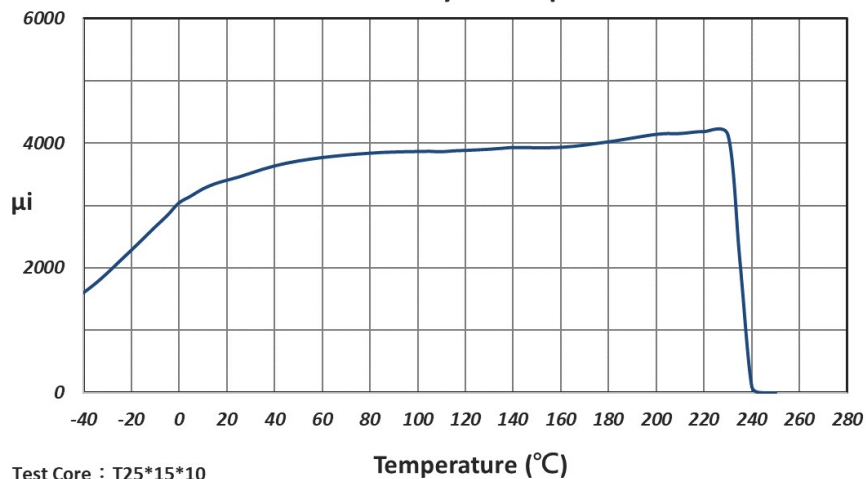
Material	Part no.	G1 (mm)	G2 (mm)	Inductance Factor A_L (nH/N ²)
P453	P453EEH42/42G271	0.40	0.20	271 ±10%
	P453EEH42/42G190	0.60	0.30	190 ±10%
	P453EEH42/42G123	1.00	0.50	123 ±10%

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

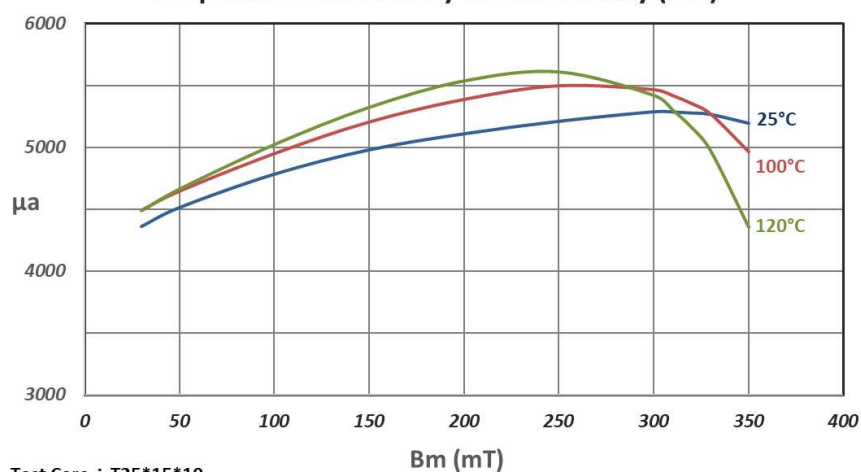
Material properties:

	Symbol	Unit	Measuring Conditions			P453
			Freq.	Flux den.	Temp.	
Initial Permeability	μ_i		10 kHz	0.25 mT	25°C	3500 ±25%
Amplitude Permeability	μ_a		25 kHz	200 mT	25°C	> 5000
					100°C	> 5000
Power Loss	Pv	kW/m³	100 kHz	200 mT	25°C	230
					100°C	260
			300 kHz	100 mT	25°C	240
					100°C	300
			500 kHz	50 mT	25°C	145
					100°C	180
Saturation Flux Density	Bs	mT	10 kHz	1200 A/m	25°C	535
					100°C	425
Remanence	Br	mT	10 kHz	1200 A/m	25°C	67
					100°C	60
Coercivity	Hc	A/m	10 kHz	1200 A/m	25°C	8
					100°C	7
Hysteresis Material Constant	η_B	10 ⁻⁶ /mT	10 kHz	1.5-3.0 mT	25°C	< 0.6
Disaccommodation Factor	DF	10 ⁻⁶	10 kHz	< 0.25 mT	25°C	< 1
Curie Temperature	Tc	°C				> 215
Resistivity	ρ	Ωm				5.00
Density	d	g/cm³				4.90

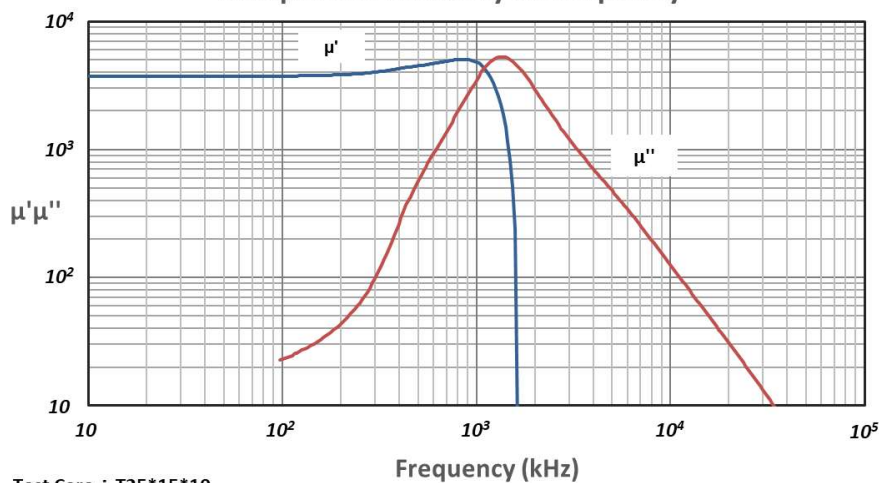
Initial Permeability vs Temperature



Amplitude Permeability vs Flux Density (Bm)



Complex Permeability vs Frequency



Wide Temperature/Low Loss Material

P453

