

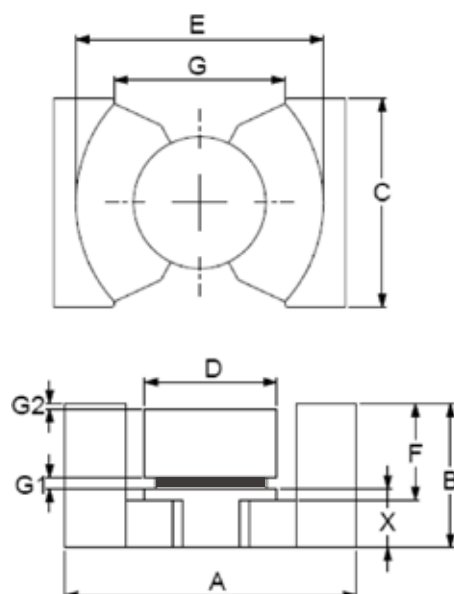
Multi-gap Ferrite Core

P453 PQH40/40

2026/Jul. Version 1.0

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Multi-gap Ferrite Core PQH40/40



Core dimensions:

A	40.64 ± 0.60
B	20.00 ± 0.15
C	28.00 ± 0.50
D	15.00 ± 0.30
E	36.80 ± 0.60
F	14.85 ± 0.15
G	29.00 ± 0.50
X	5.45 ± 0.20

Application Fields:

1.

OBC

2.

DC/DC Converter

3.

Solar Inverter

4.

UPS

5.

Industrial SMPS

6.

Telecom/Server SMPS

Characteristics:

$\Sigma L/A$	L_e	A_e	A_{min}	V_e	W_t/set
0.511 mm ⁻¹	96.8 mm	189.5 mm ²	172.3 mm ²	18350mm ³	100 g

Material	Part no.	G1 (mm)	G2 (mm)	Inductance Factor A_L (nH/N ²)
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%

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

Wide Temperature/Low Loss Material

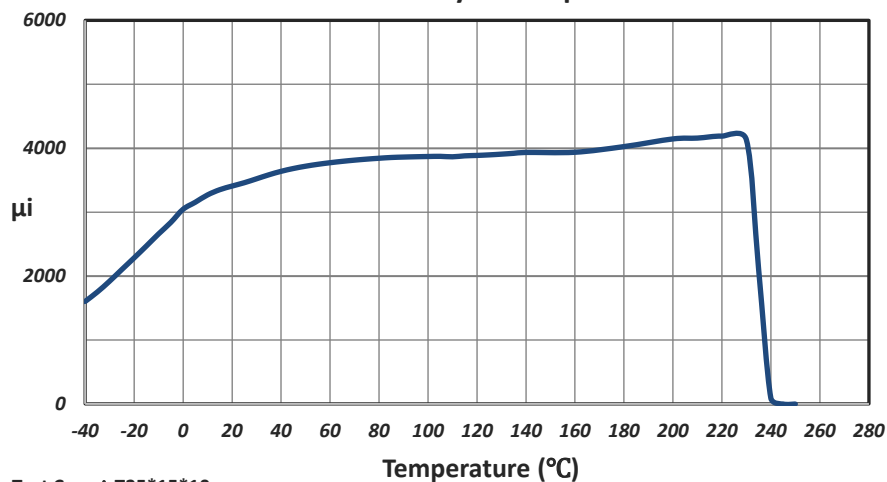
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Material properties:

	Symbol	Unit	Measuring Conditions			P453
			Freq.	Flux den.	Temp.	
Initial Permeability	μ_i		10kHz	0.25mT	25°C	3500 $\pm$25%
Amplitude Permeability	μ_a		25kHz	200mT	25°C	> 5000
					100°C	> 5000
Power Loss	Pv	kW/m ³	100kHz	200mT	25°C	230
					100°C	260
			300kHz	100mT	25°C	240
					100°C	300
			500kHz	50mT	25°C	145
					100°C	180
Saturation Flux Density	Bs	mT	10kHz	1200A/m	25°C	535
					100°C	425
Remanence	Br	mT	10kHz	1200A/m	25°C	67
					100°C	60
Coercivity	Hc	A/m	10kHz	1200A/m	25°C	8
					100°C	7
Hysteresis Material Constant	η_B	10 ⁻⁶ /mT	10kHz	1.5-3.0mT	25°C	< 0.6
Disaccommodation Factor	D _F	10 ⁻⁶	10kHz	< 0.25mT	25°C	< 1
Curie Temperature	T _c	°C				> 215
Resistivity	ρ	Ω m				5.00
Density	d	g/cm ³				4.90

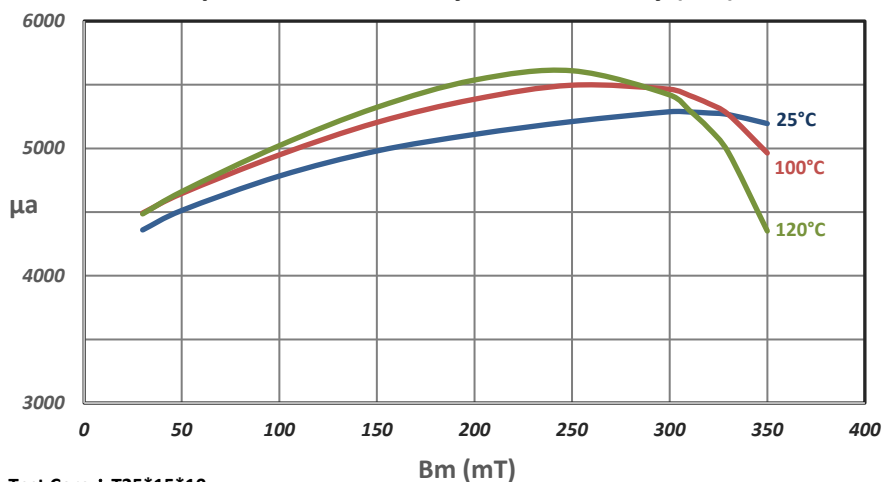
Wide Temperature/Low Loss Material P453

Initial Permeability vs Temperature



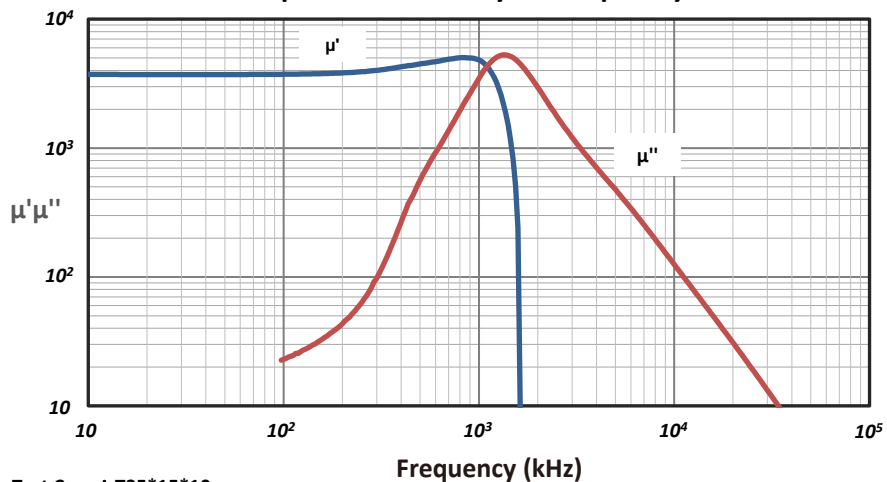
Test Core : T25*15*10

Amplitude Permeability vs Flux Density (B_m)



Test Core : T25*15*10

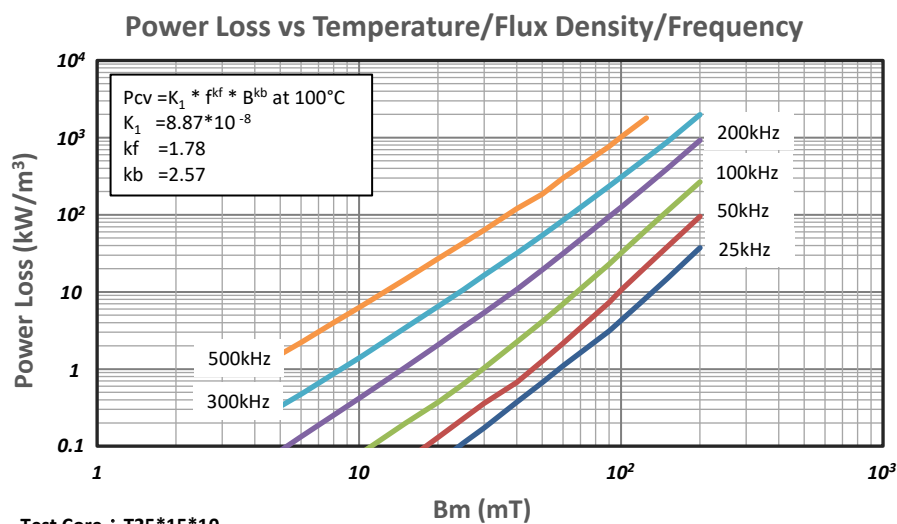
Complex Permeability vs Frequency



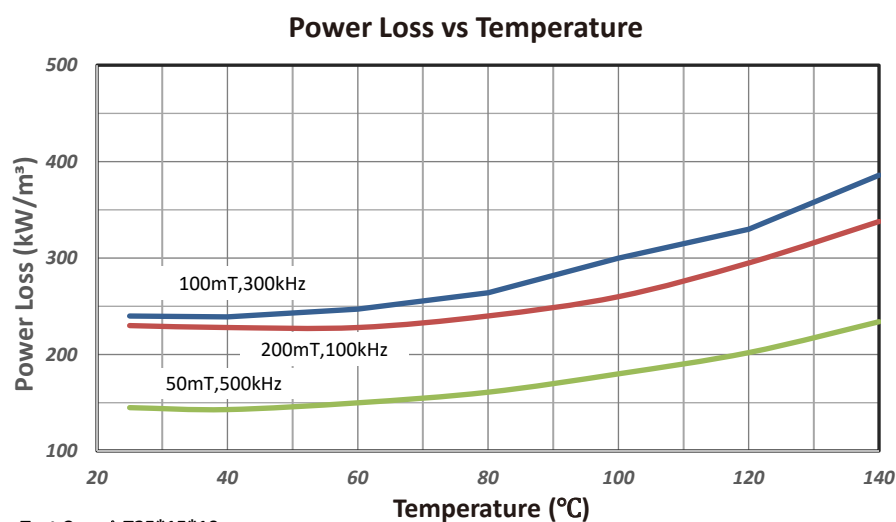
Test Core : T25*15*10

Wide Temperature/Low Loss Material

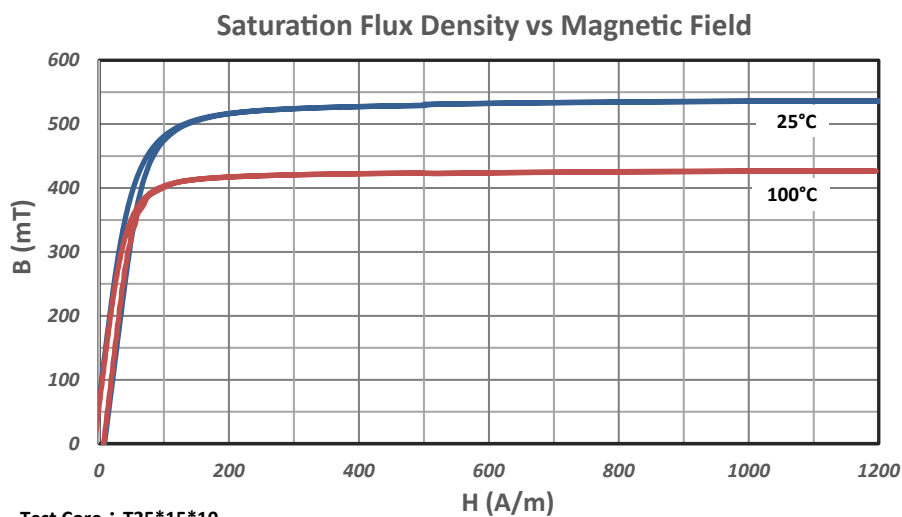
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Test Core : T25*15*10



Test Core : T25*15*10



Test Core : T25*15*10