

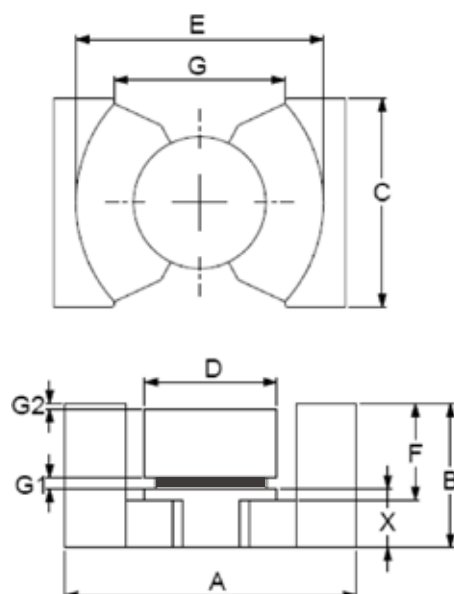
Multi-gap Ferrite Core

P53 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 ± 0.25
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)
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%

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

High Frequency/Low Loss Material

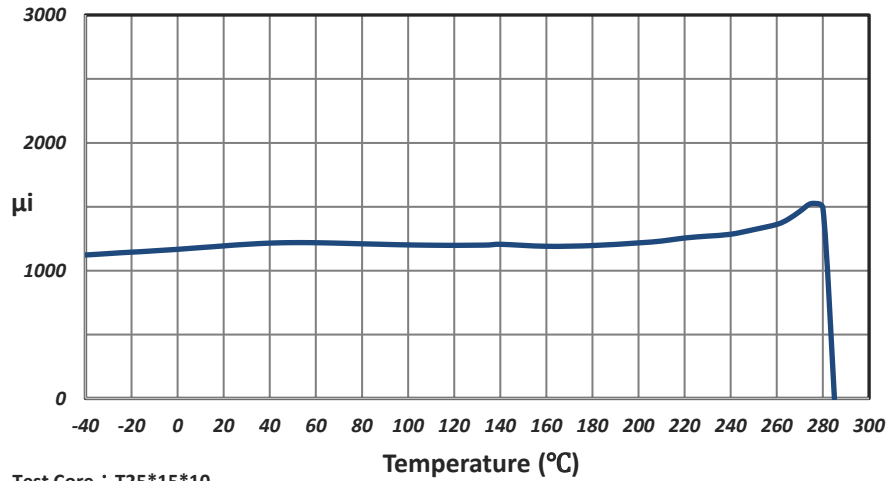
P53

Material properties:

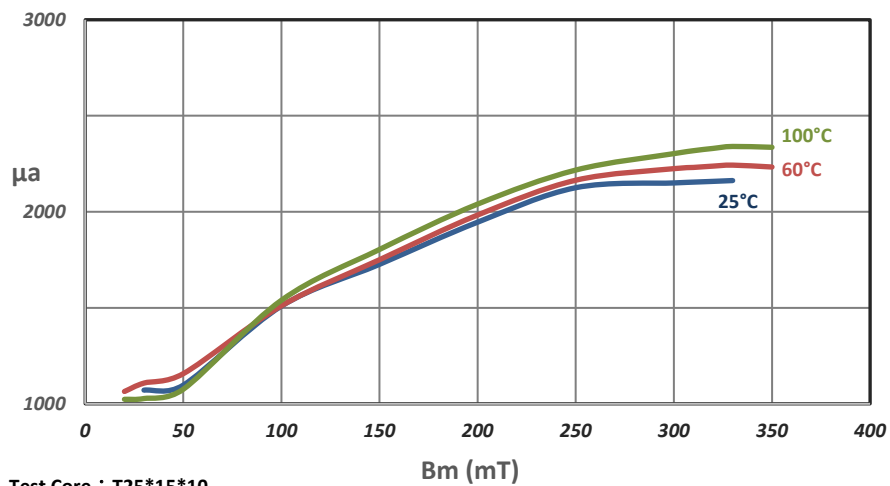
	Symbol	Unit	Measuring Conditions			P53
			Freq.	Flux den.	Temp.	
Initial Permeability	μ_i		$\leq 10\text{kHz}$	0.25mT	25°C	1200 $\pm 25\%$
Amplitude Permeability	μ_a		25kHz	200mT	25°C	> 1900
					100°C	> 2000
Power Loss	Pv	kW/m ³	300kHz	100mT	25°C	350
					100°C	310
			500kHz	50mT	25°C	80
					100°C	60
			500kHz	100mT	25°C	650
					100°C	650
			1000kHz	50mT	25°C	300
					100°C	300
Saturation Flux Density	Bs	mT	10kHz	1200A/m	25°C	515
					100°C	420
Remanence	Br	mT	10kHz	1200A/m	25°C	180
					100°C	120
Coercivity	Hc	A/m	10kHz	1200A/m	25°C	38
					100°C	33
Hysteresis Material Constant	η_B	10 ⁻⁶ /mT	10kHz	1.5-3.0mT	25°C	< 1
Disaccommodation Factor	D _F	10 ⁻⁶	10kHz	< 0.25mT	25°C	< 2
Curie Temperature	T _c	°C				≥ 280
Resistivity	ρ	Ωm				10.00
Density	d	g/cm ³				4.80

High Frequency/Low Loss Material P53

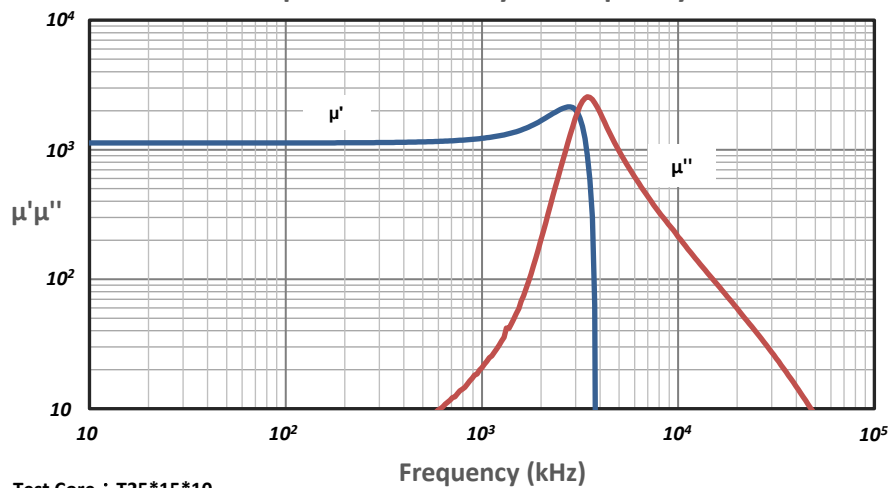
Initial Permeability vs Temperature



Amplitude Permeability vs Flux Density (B_m)



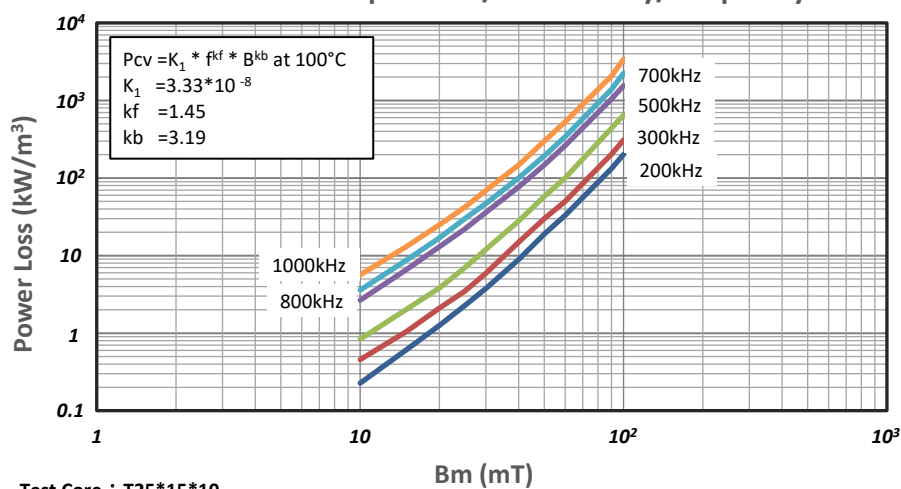
Complex Permeability vs Frequency



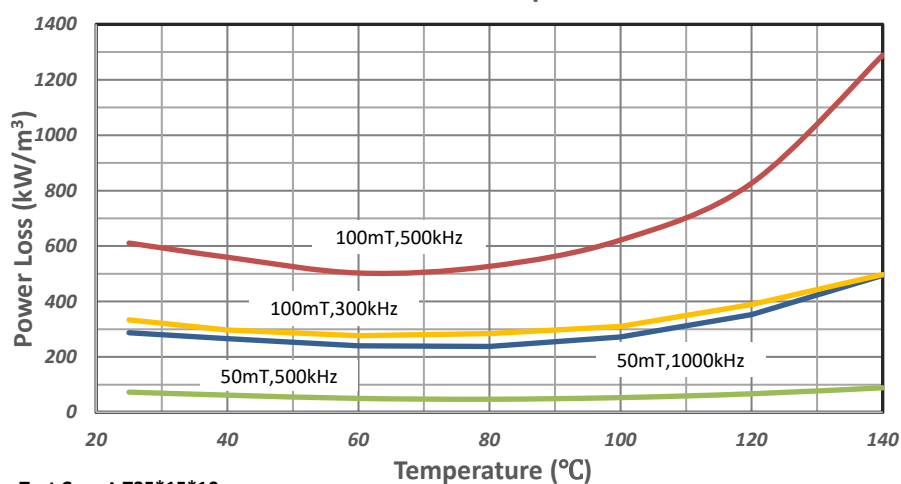
High Frequency/Low Loss Material

P53

Power Loss vs Temperature/Flux Density/Frequency



Power Loss vs Temperature



Saturation Flux Density vs Magnetic Field

