

TDK Power Ferrite Material PC47, PC90 and PC95

Material			PC47	PC90	PC95
Initial permeability	μ_i	25 °C	2400±25%	2200±25%	3300±25%
Core loss volume density at 100kHz, 200mT Typical Values	$P_{cv}(kW/m^3)$	25 °C	600	680	350.0
		60 °C	400	470	300.0
		80 °C	300	380	280.0
		100 °C	250	320	290.0
		120 °C	360	400	350.0
Saturation magnetic flux density at 1000A/m Typical Values	$\beta_s(mT)$	25 °C	530	540	530.0
		60 °C	480	510	480.0
		100 °C	420	450	410.0
		120 °C	390	420	380.0
Remanent flux density Typical Values	$\beta_r(mT)$	25 °C	180	170	85.0
		60 °C	100		70.0
		100 °C	60	60	60.0
		120 °C	60		55.0
Curie temperature	$T_c(^{\circ}C)$	min.	230	250	215
Density	$\rho_b(kg/m^3)$		4.9×10^3	4.9×10^3	4.9×10^3
Electrical Resistivity	ρ_v	$\Omega \cdot M$	4.0	4.0	6.0

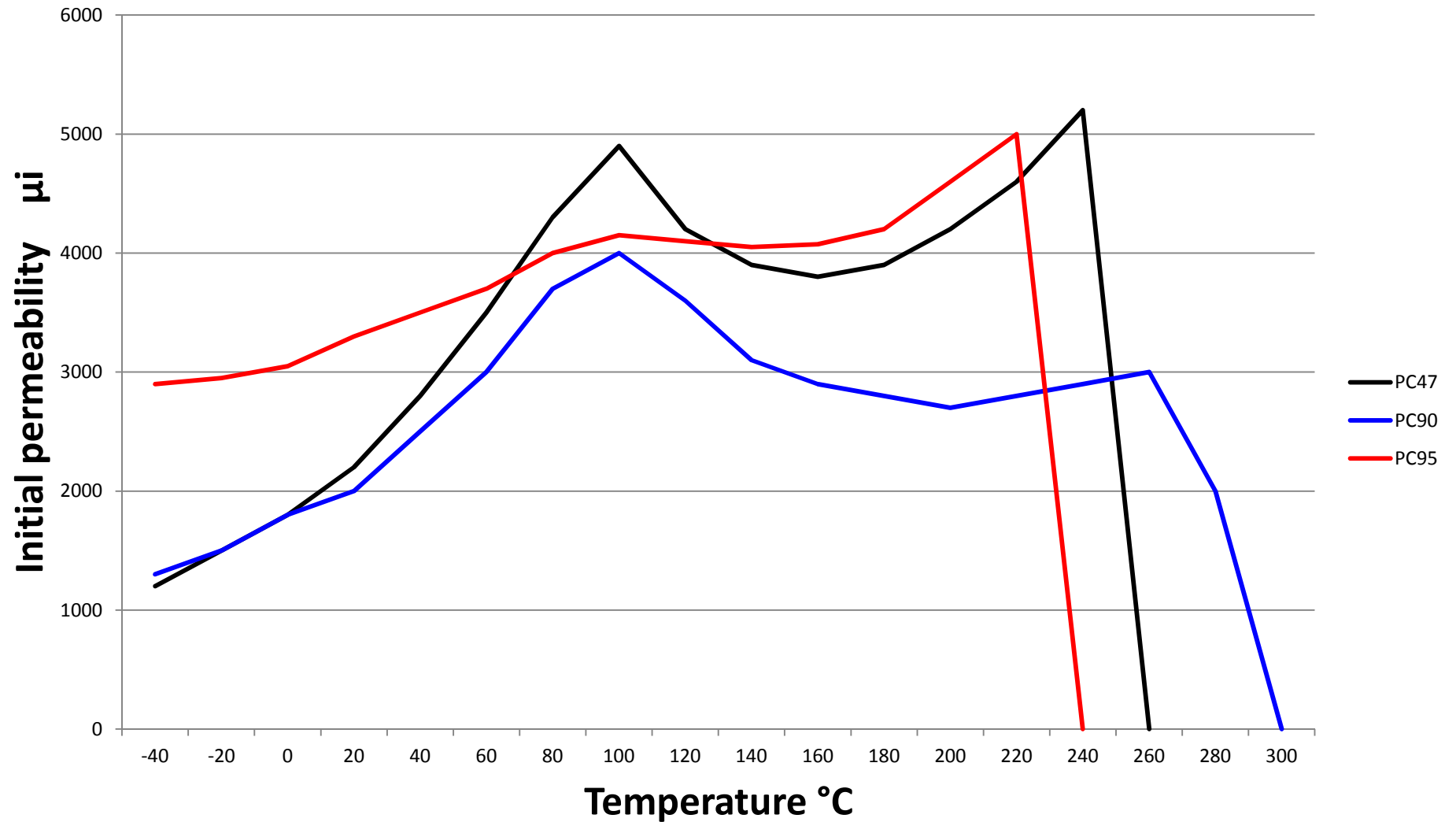
Unless otherwise specify the tolerance, the values are shown as a typical.

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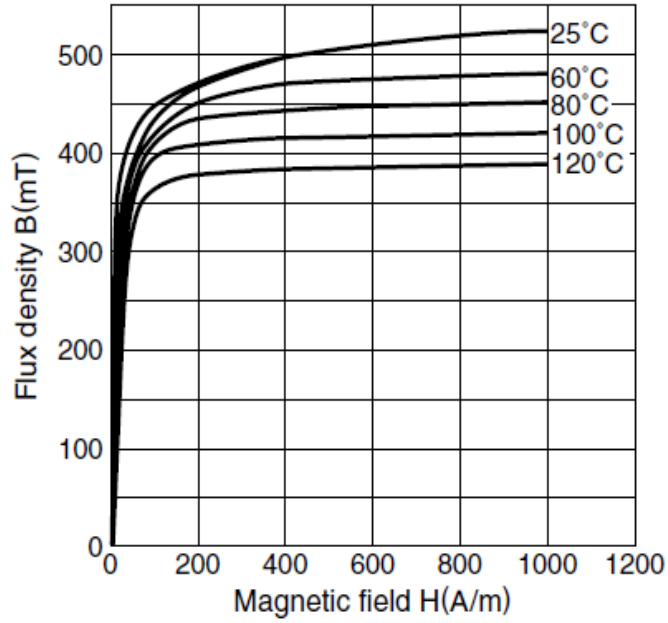
TDK Power Ferrite Initial Perm verses Temperature

PC47 - PC90 - PC95

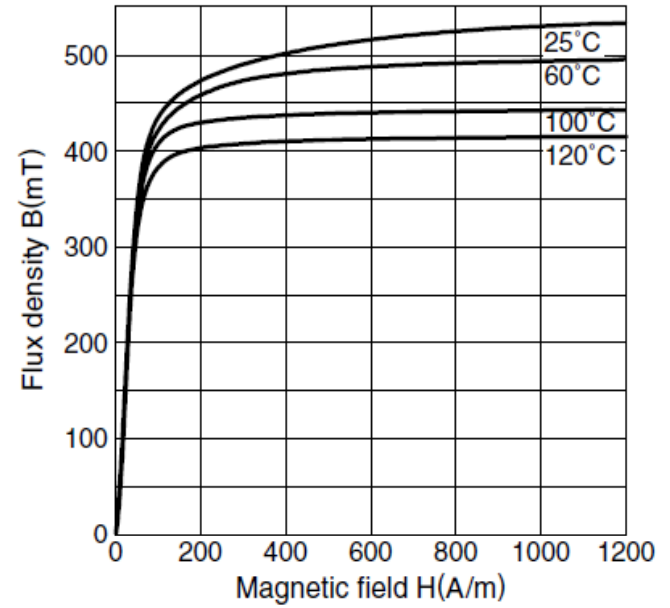


TDK Power Ferrite Magnetization Curves

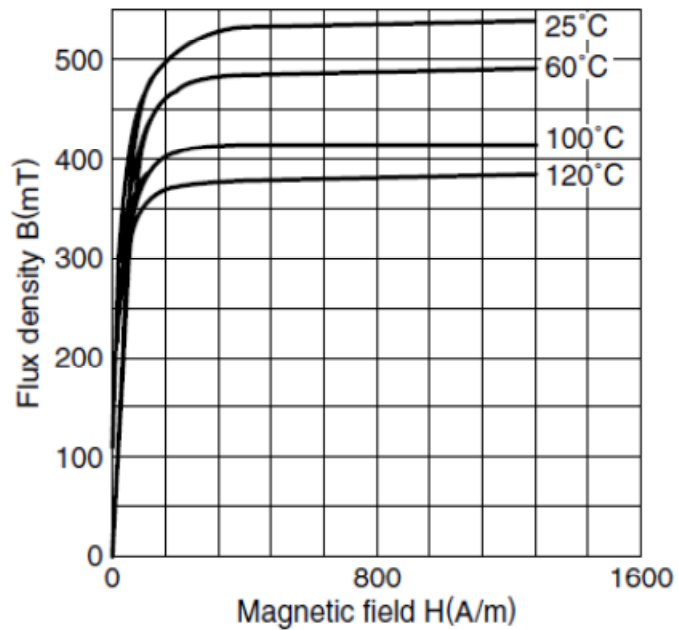
Material: PC47



Material: PC90

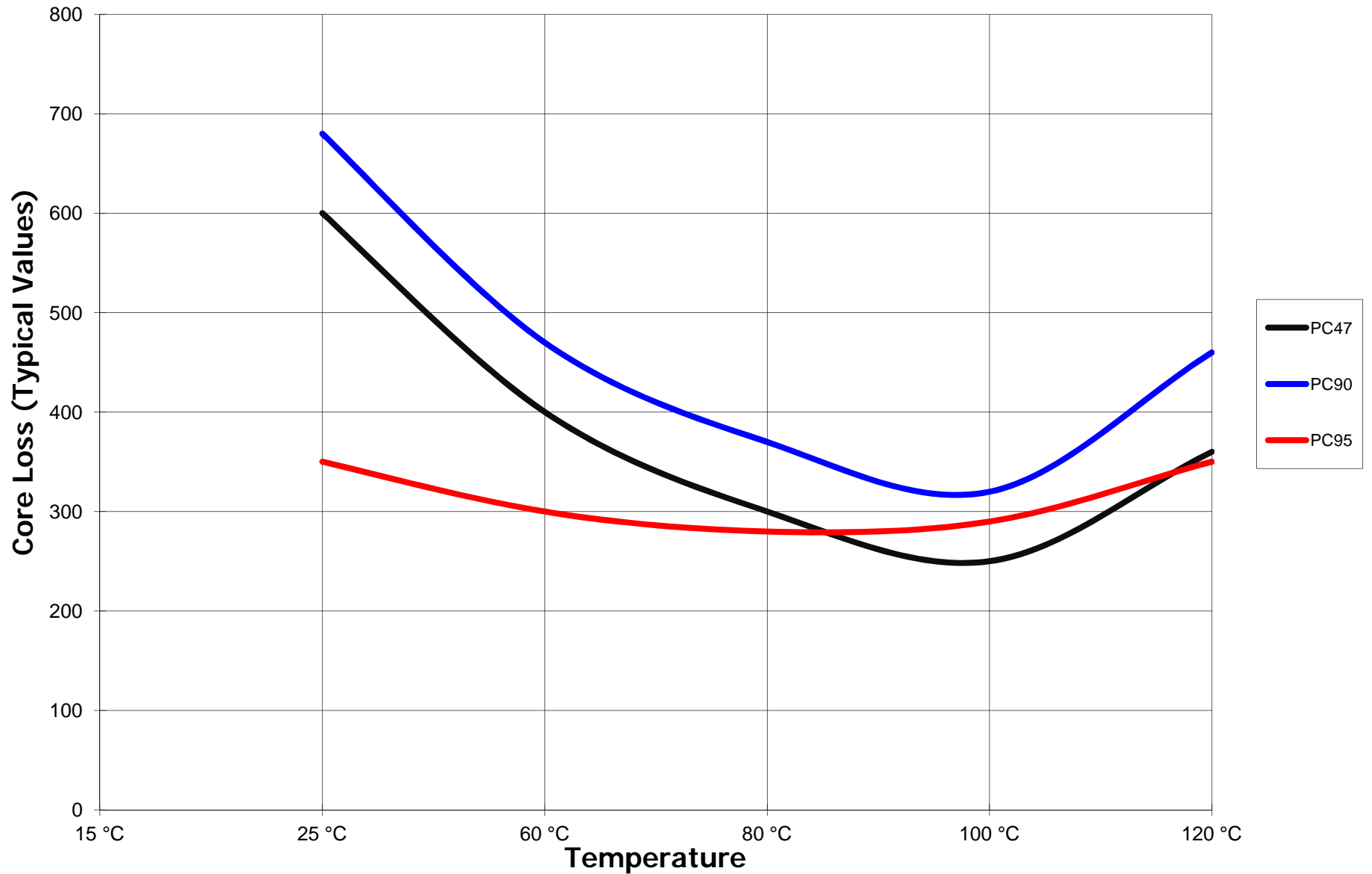


Material: PC95



TDK Power Ferrite Core Loss Verses Temperature

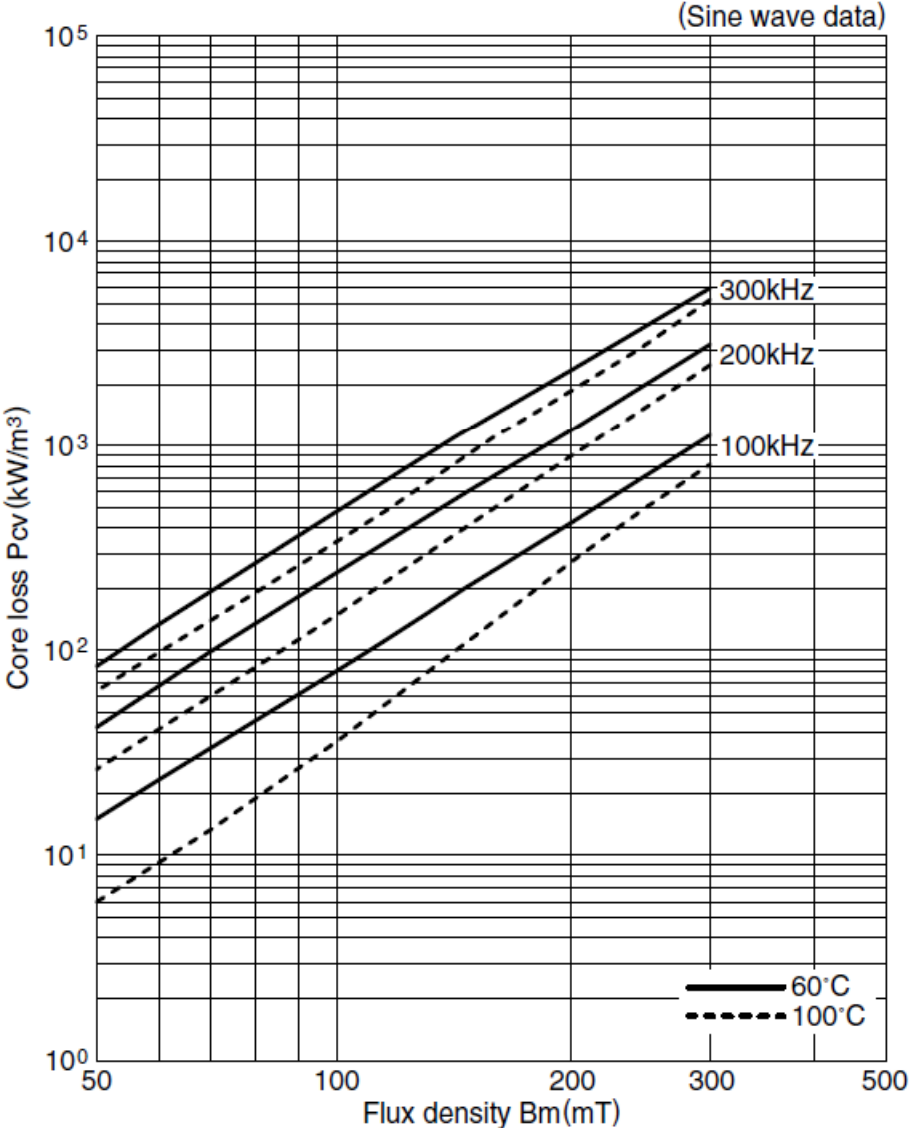
PC47 - PC90 - PC95



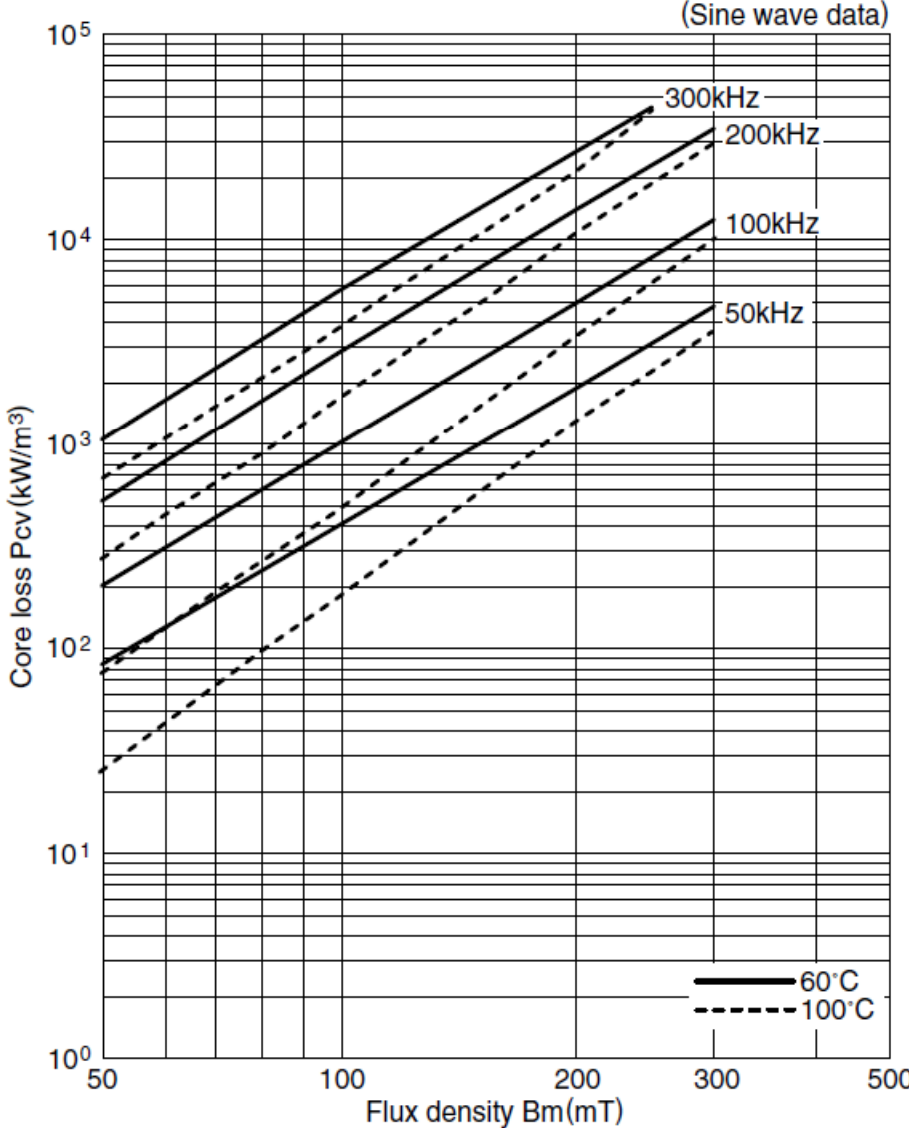
TDK Power Material Core Loss verses Flux Density verses Frequency

PC47 - PC90 - PC95

Material: PC47



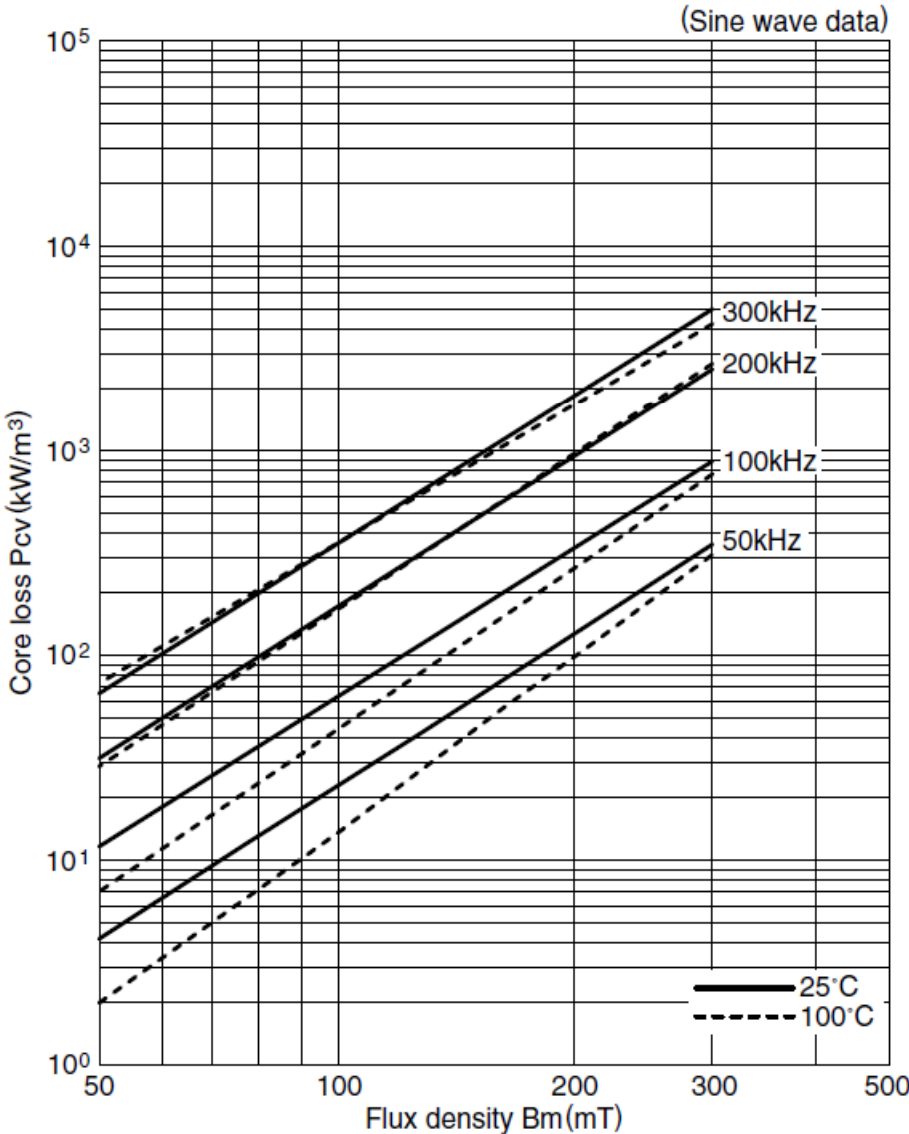
Material: PC90



TDK Power Material Core Loss verses Flux Density verses Frequency

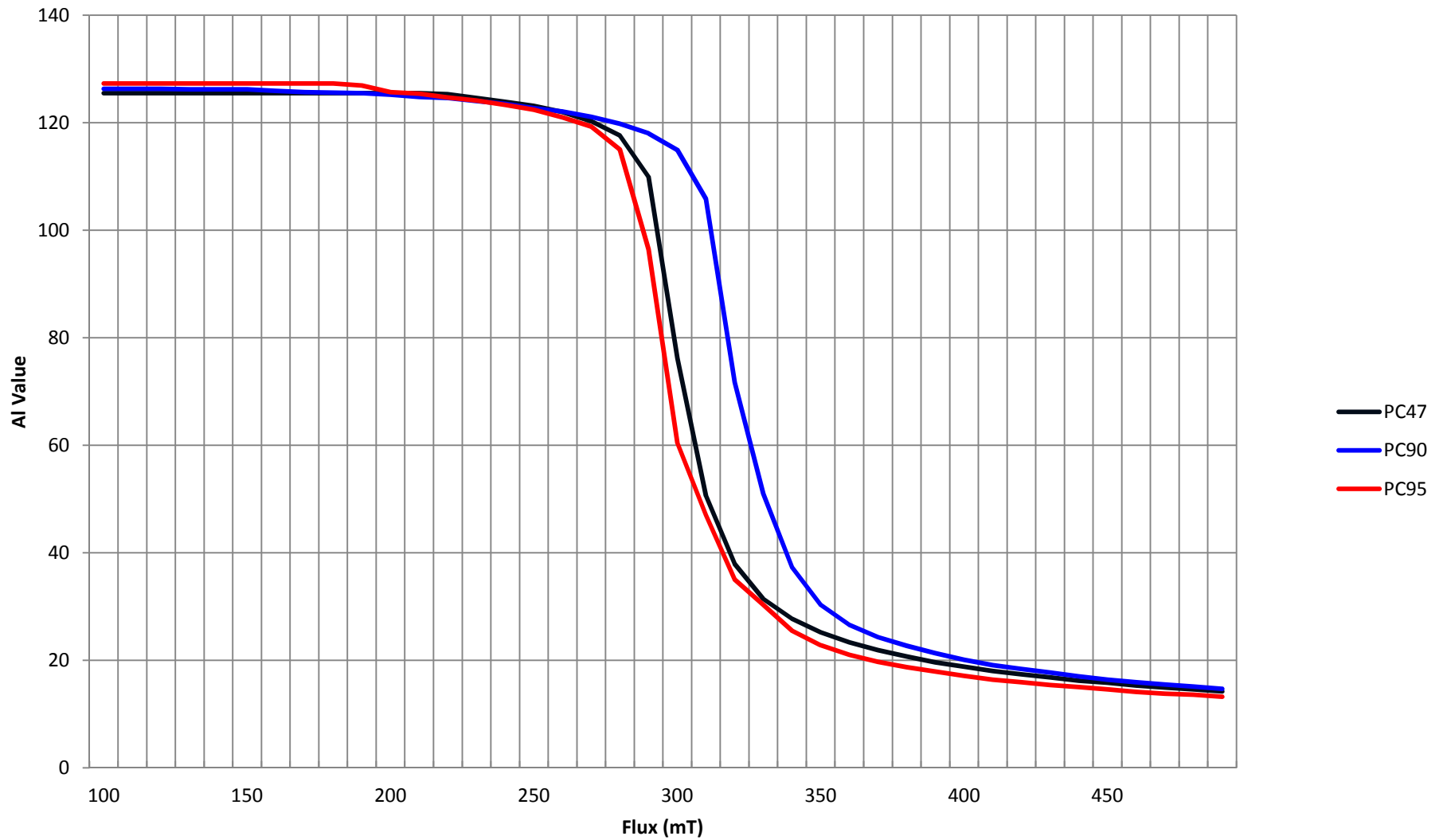
PC47 - PC90 - PC95

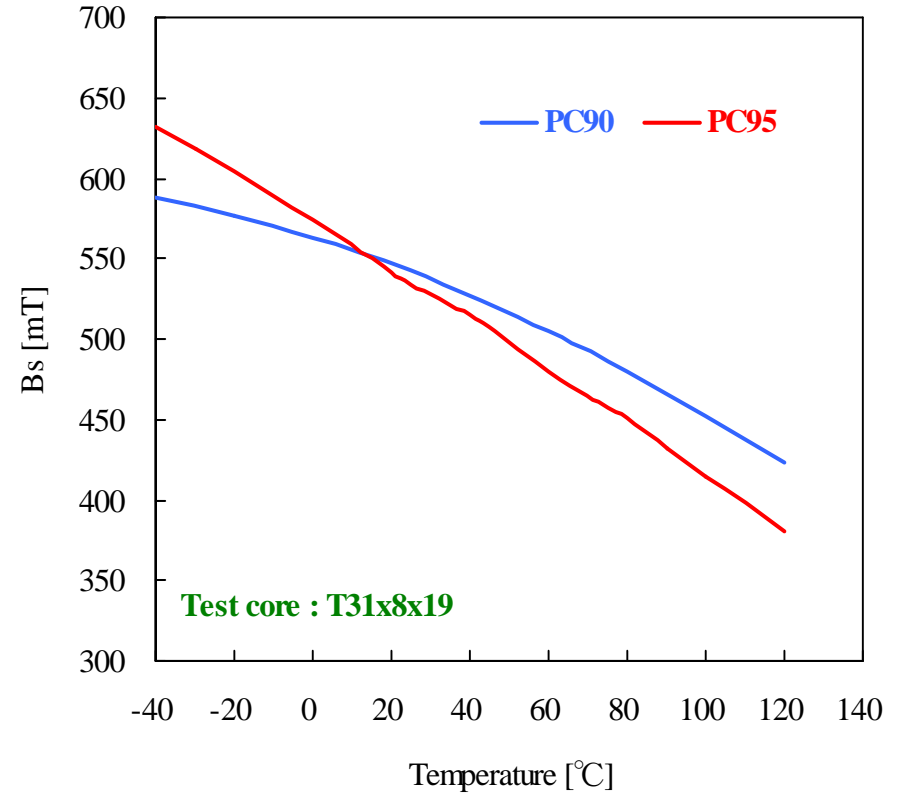
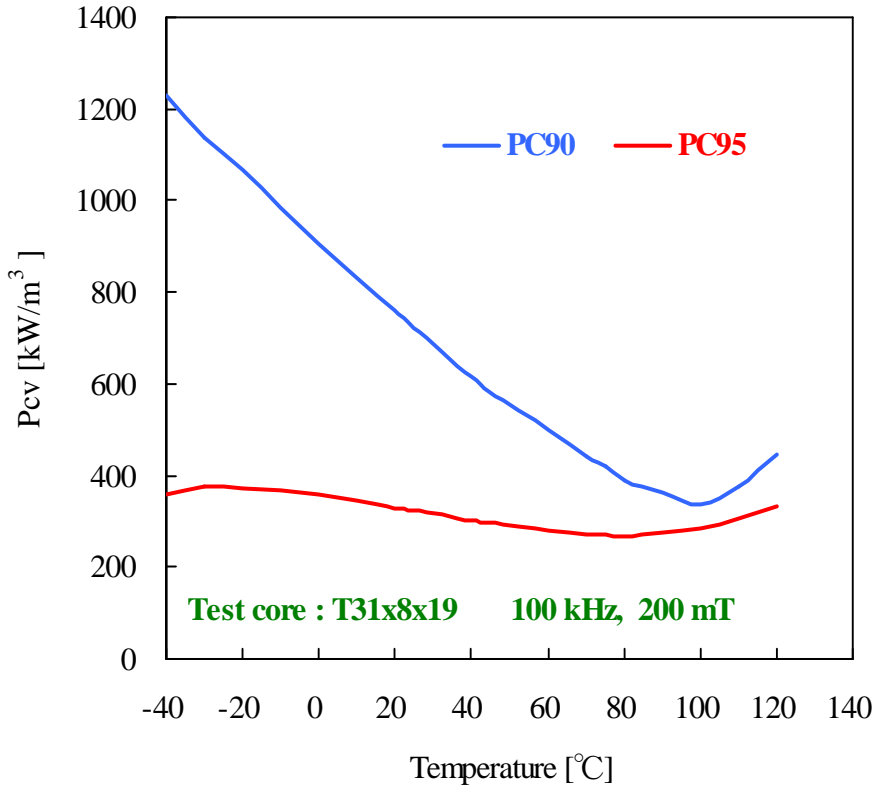
Material: PC95



TDK Power Ferrite Saturation β_{sat}

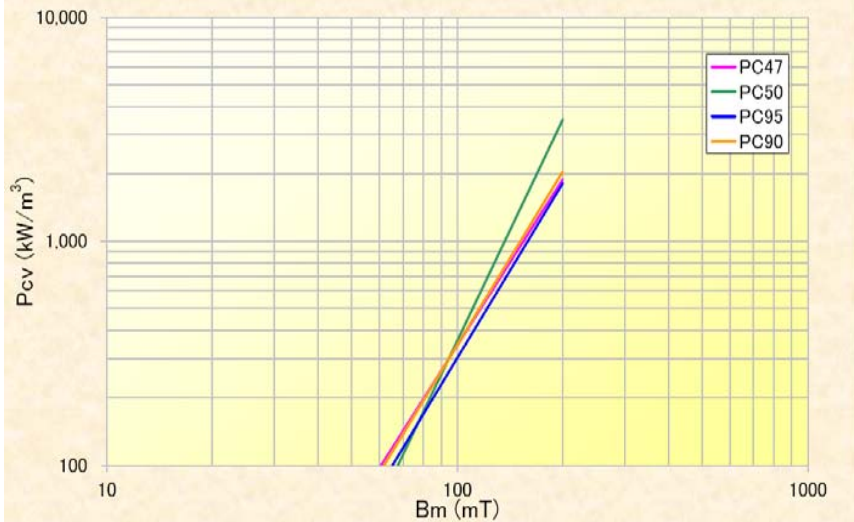
PC47 - PC90 - PC95



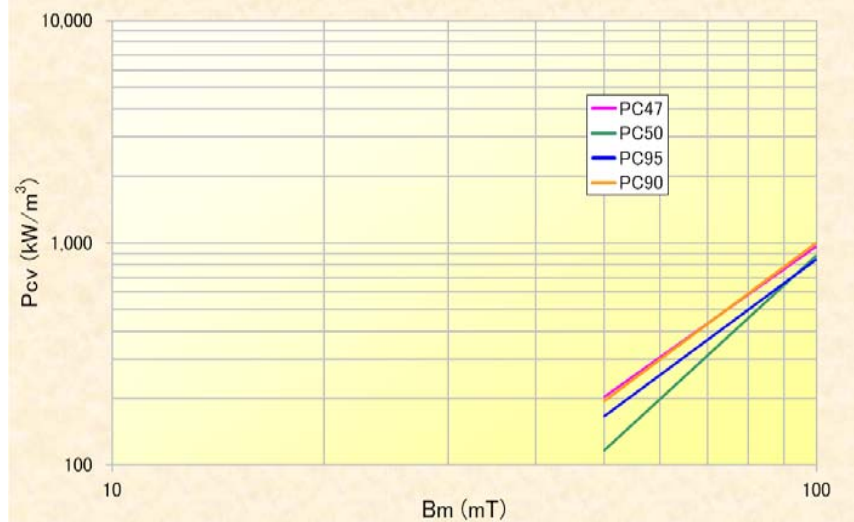


High Frequency - Core Loss vs β_m Graphs of PC47 - PC50 - PC90 - PC95

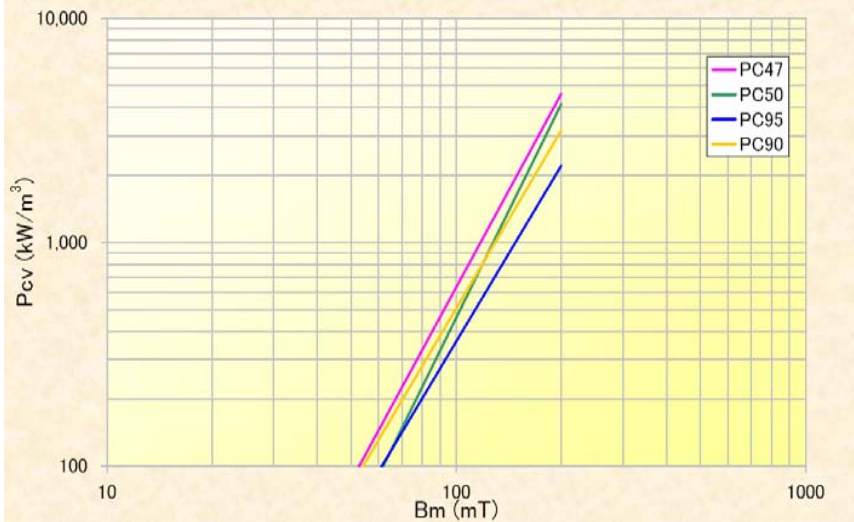
Bm vs. Pcv
300 kHz, 100°C



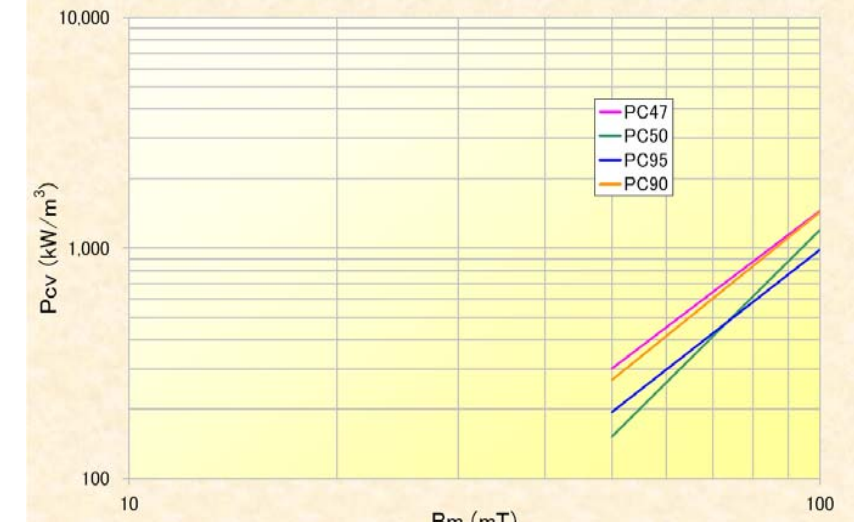
Bm vs. Pcv
500 kHz, 100°C



Bm vs. Pcv
300 kHz, 120°C



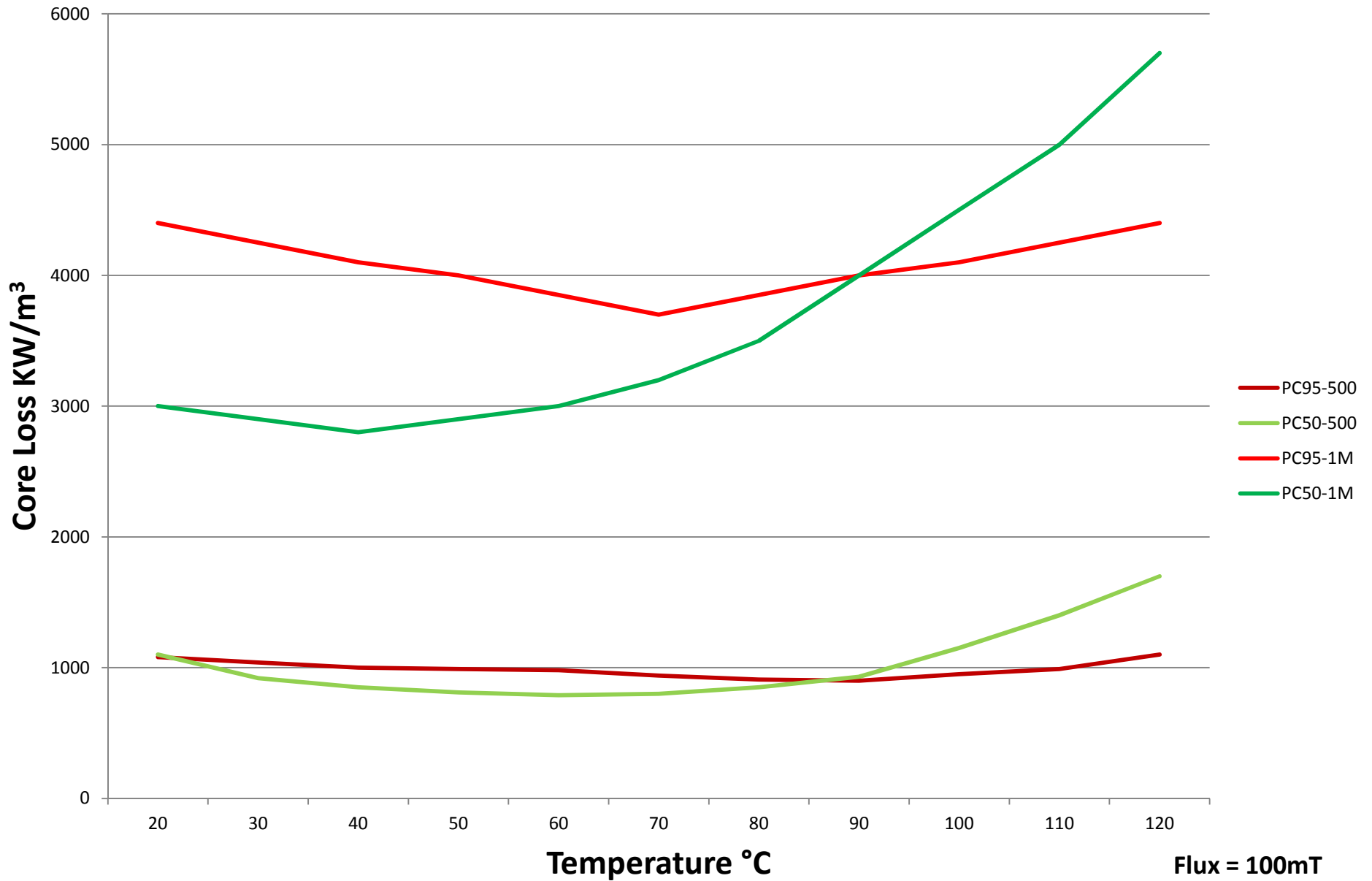
Bm vs. Pcv
500 kHz, 120°C



Power Ferrite Core Loss vrs Temperature

PC50 - PC95

500KHz & 1MHz



Typical Data

Flux = 100mT