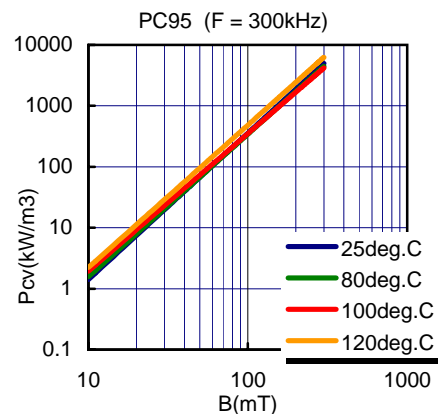
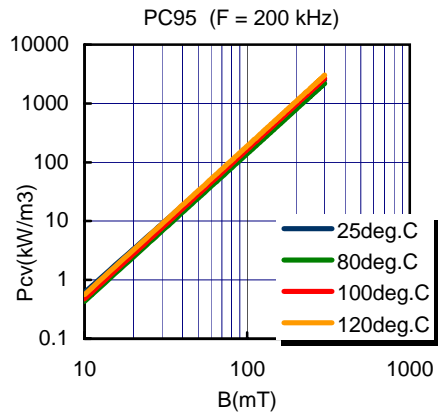
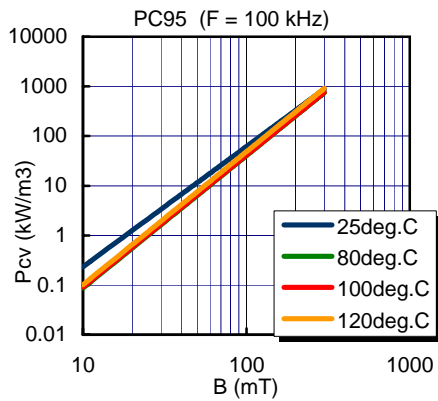
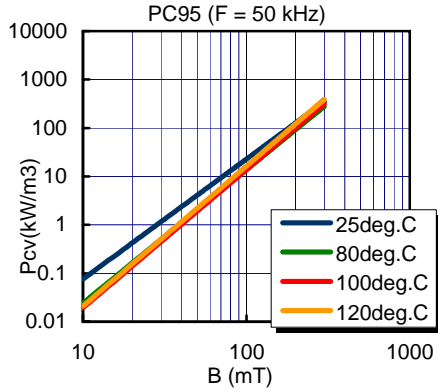


PC95

Power loss P_{cv} vs. flux density B



PC95

Formulas for the Power loss P_{cv}(kW/m³)

Power loss P_{cv} vs. flux density B

$$\begin{aligned} 50 \text{ kHz ; } P_{cv} &= 2.53 \times 10^{-4} \times B^{2.48} \text{ (at 25 'C)} \\ P_{cv} &= 4.31 \times 10^{-5} \times B^{2.75} \text{ (at 80 'C)} \\ P_{cv} &= 2.72 \times 10^{-5} \times B^{2.85} \text{ (at 100 'C)} \\ P_{cv} &= 2.69 \times 10^{-5} \times B^{2.89} \text{ (at 120 'C)} \end{aligned}$$

$$\begin{aligned} 100 \text{ kHz ; } P_{cv} &= 8.88 \times 10^{-4} \times B^{2.42} \text{ (at 25 'C)} \\ P_{cv} &= 1.89 \times 10^{-4} \times B^{2.66} \text{ (at 80 'C)} \\ P_{cv} &= 2.01 \times 10^{-4} \times B^{2.66} \text{ (at 100 'C)} \\ P_{cv} &= 2.15 \times 10^{-4} \times B^{2.68} \text{ (at 120 'C)} \end{aligned}$$

$$\begin{aligned} 200 \text{ kHz ; } P_{cv} &= 2.20 \times 10^{-3} \times B^{2.45} \text{ (at 25 'C)} \\ P_{cv} &= 1.34 \times 10^{-3} \times B^{2.51} \text{ (at 80 'C)} \\ P_{cv} &= 1.39 \times 10^{-3} \times B^{2.54} \text{ (at 100 'C)} \\ P_{cv} &= 1.69 \times 10^{-3} \times B^{2.52} \text{ (at 120 'C)} \end{aligned}$$

$$\begin{aligned} 300 \text{ kHz ; } P_{cv} &= 5.63 \times 10^{-3} \times B^{2.40} \text{ (at 25 'C)} \\ P_{cv} &= 7.19 \times 10^{-3} \times B^{2.34} \text{ (at 80 'C)} \\ P_{cv} &= 1.07 \times 10^{-2} \times B^{2.26} \text{ (at 100 'C)} \\ P_{cv} &= 1.03 \times 10^{-2} \times B^{2.34} \text{ (at 120 'C)} \end{aligned}$$

Test Core : T31x8x19(ODxTHxIDmm)
Sine wave data

TDK Corporation
Ferrite & Magnetic Products Business Group