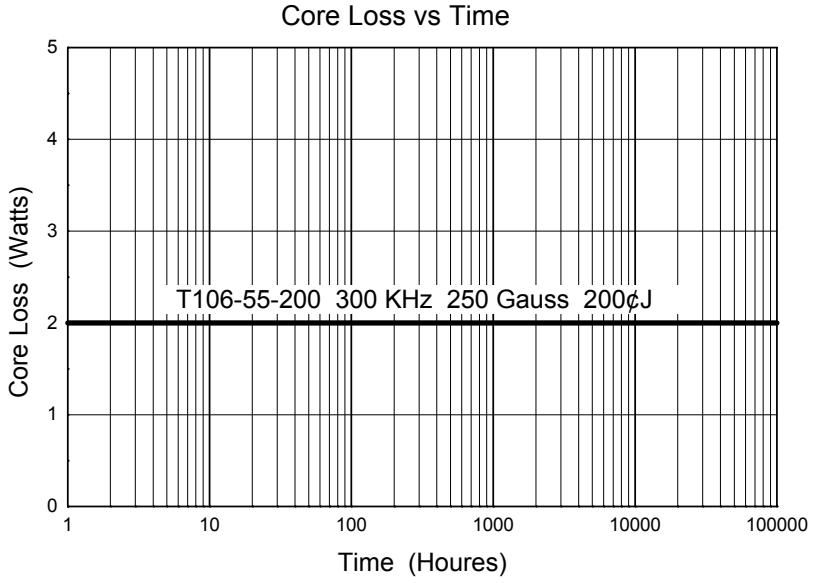
TAF200™ SERIES

THERMAL AGING FREE
UP TO 200°C

Thermal Aging problem of conventional iron powder cores has long annoyed power supply design engineers with the increasing demand for high power and high density applications. In automotive and industrial control applications where the components are exposed to elevated temperature environment, the conventional iron powder cores are subject to thermal aging in very short period of time.

Why Thermal Aging? The conventional iron powder material is bonded by general resins; such as epoxy or phenol, which are lower in manufacturing cost, but also lower in breakdown temperature. Although curie temperature (Tc) of pure iron is 730°C, the resins inside of core material will start the deteriorating process as low as 100°C depending upon which type of binder the core manufacturers apply. Some general resin breakdown temperature could be as high as 125 to 150°C. The deterioration process will accelerate especially in the applications where core loss exceeds copper loss and the component internal temperature rise will further damage the binder. The eddy current loss will also increase during the thermal aging process and may overheat the core which eventually leads to permanent damage.

Curie TAF200™ Series cores are designed to be thermal aging free up to 200°C. Curie's state-of-the-art / proprietary co-polymer bonding process enables our cores to operate up to 200°C without any breakdown on our binding material. For SMD applications, Curie offers custom Super Flux material that can operate up to 320°C. The new break through in our material research will give design engineers more freedom and peace of mind when they select **TAF200**™ Series Iron Powder material from Curie for their power supply designs.



Note: 1. Effective November 1, 2002, the conventional iron powder cores material 75, 75H, SF-53, 35, 55, 60 will be available in **TAF200**™ SERIES with a suffix "-200" at the end of the material code.

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