

铁硅铝合金 DSF 090 材料特性

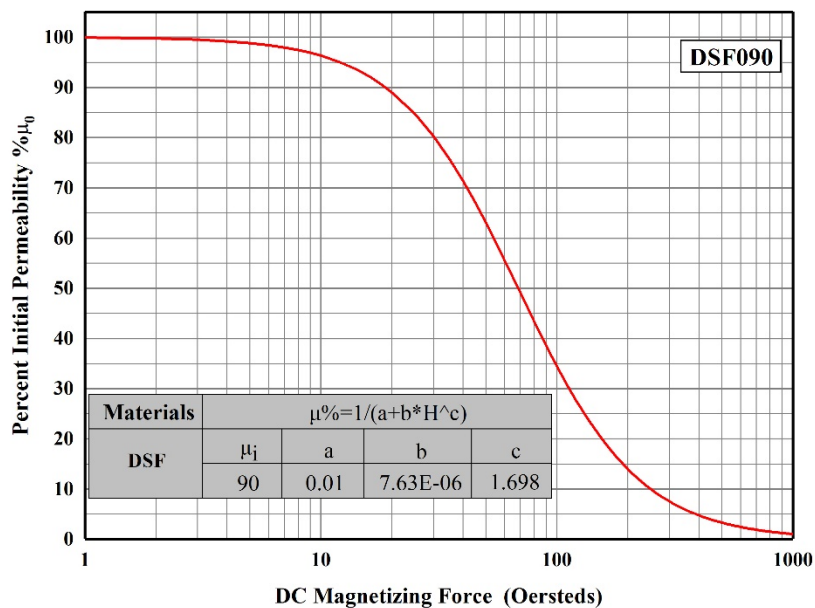
High Frequency Sendust DSF090 Material Characteristics

| 特性<br>SYMBOL                                           | 测试条件<br>CONDITIONS |             | 特征值<br>VALUE |
|--------------------------------------------------------|--------------------|-------------|--------------|
| 磁导率 $\mu$<br>Initial Permeability                      | 200 kHz, 0.05 V    | 25 °C       | 90           |
| 饱和磁感应强度 $B_s$ (mT)<br>Saturation magnetic flux Density | 50 Hz, >50000 A/m  | 25 °C       | 1000         |
| 功耗(mW/cm <sup>3</sup> )<br>Core loss                   | 50 kHz, 100 mT     | 25 °C       | 90           |
|                                                        |                    | 100°C       | 130          |
| 居里温度 $T_c$ (°C)<br>Curie Temperature                   | 10kHz, B<0.25mT    |             | 500          |
| 密度 d (g/cm <sup>3</sup> )<br>Density                   |                    | 25°C        | 5.9          |
| 工作温度 T (°C)<br>Temperature Range                       |                    |             | -55~200      |
| 导热系数 W/(m·K)<br>Thermal Conductivity Coefficient       |                    | 25°C        | 5.56         |
| 弯曲强度 (MPa)<br>Tensile Strength                         |                    | 22°C, 48%RH | 52.4         |
| 压溃强度 (MPa)<br>Compressive Strength                     |                    | 22°C, 48%RH | 133          |
| 杨氏模量 (GPa)<br>Young's modulus                          |                    | 22°C, 48%RH | 71.2         |
| 维氏硬度 (HV0.1)<br>Vickers Hardness                       |                    | 22°C, 48%RH | 225          |
| 磁致伸缩系数 (ppm)<br>Magnetostrictive Coefficient           |                    | 25°C        | 0.6          |

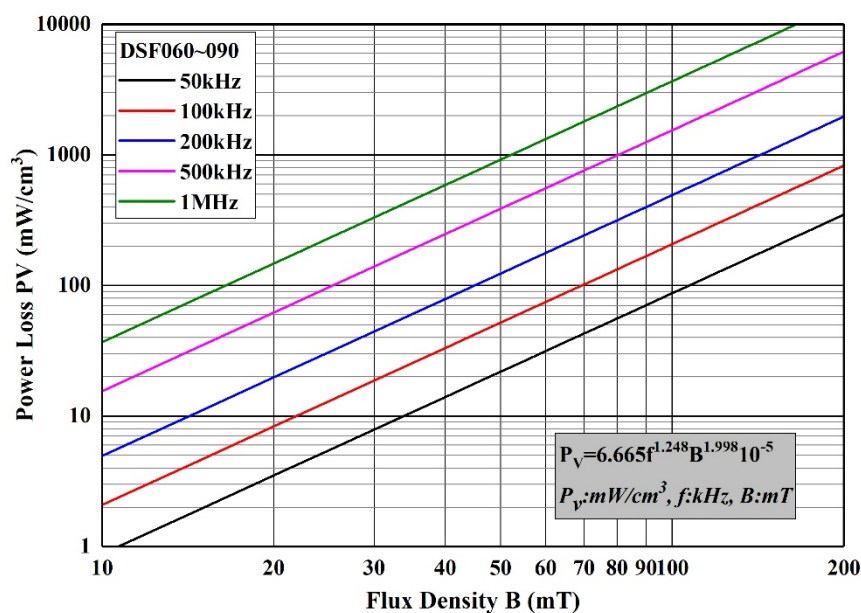
以上数据是根据标准样环  $\phi 26.9 \times \phi 14.7 \times 11.2$  获得的典型数据，有关产品的具体性能会在此基础上有所调整。

The above typical data are calculated from the standard toroid core. Specific performance of the product will be adjusted on this basis.

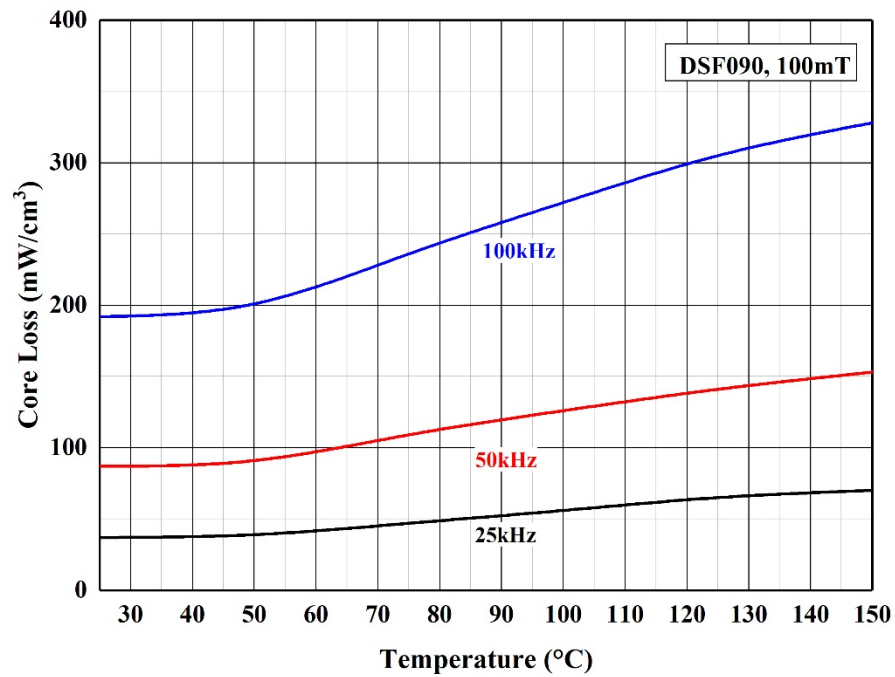
## \* 磁导率-直流叠加曲线 Permeability vs DC Bias Curve



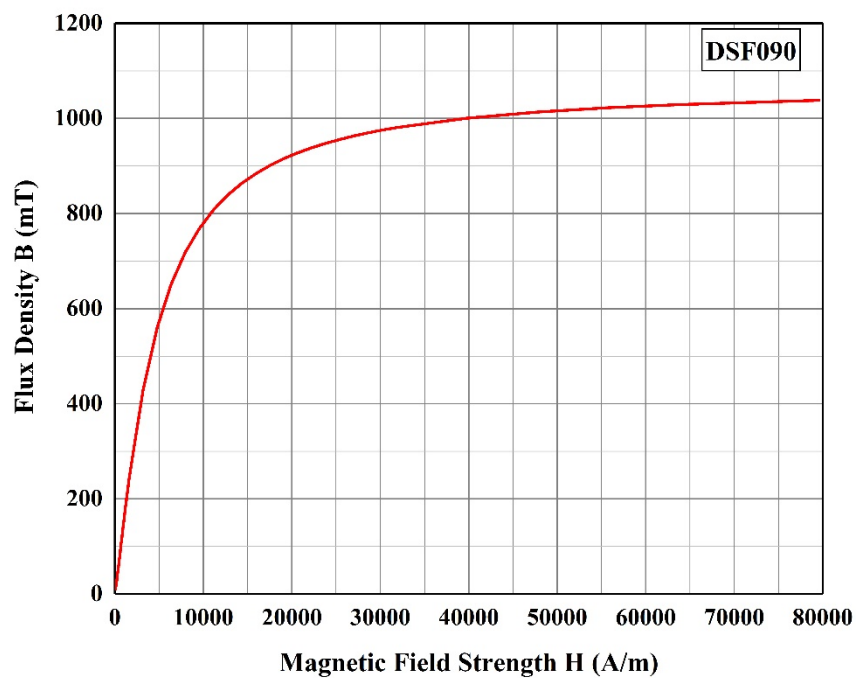
## \* 损耗-频率曲线 Core Loss vs Frequency Curve



\* 损耗-温度曲线 Core Loss vs Temperatures Curves.



\* 标准磁化曲线 Normal Magnetization Curve



\* 磁导率-频率关系曲线 Permeability vs Frequency Curv

