

# DATA SHEET

## 3F46

### Material specification

2016 March 03

**3F46 SPECIFICATION**

A high frequency power material for use in power and general purpose transformers at frequencies of 1-3MHz. Temperature characteristic tuned for stable operation in range 25-100°C. Available in product size up to 40mm.

| SYMBOL      | CONDITIONS                                                  | VALUE                                          | UNIT               |
|-------------|-------------------------------------------------------------|------------------------------------------------|--------------------|
| $\mu_i$     | 25°C; 10kHz; 0.25mT                                         | $750 \pm 20\%$                                 |                    |
| $\mu_a$     | 100°C; 25kHz; 200mT                                         | $\approx 1500$                                 |                    |
| B           | 25°C; 10kHz; 1200A/m<br>100°C; 10kHz;<br>1200A/m            | $\approx 520$<br>$\approx 430$                 | mT                 |
| Pv          | 100°C; 1MHz; 50mT<br>100°C; 3MHz; 10mT<br>100°C; 3MHz; 30mT | $\approx 150$<br>$\approx 50$<br>$\approx 500$ | mW/cm <sup>3</sup> |
| $\rho_{DC}$ | 25°C                                                        | $\approx 5$                                    | $\Omega\text{m}$   |
| Tc          |                                                             | $\geq 280$                                     | °C                 |
| density     |                                                             | $\approx 4750$                                 | kg/m <sup>3</sup>  |

based on T14/9/5

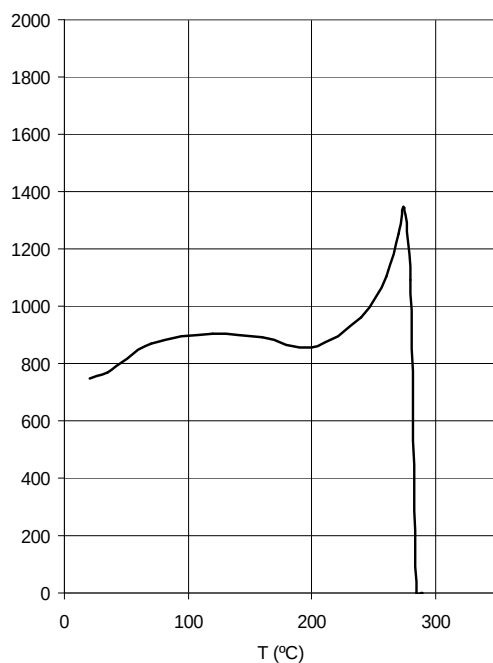


Fig.2 Permeability as a function of temperature

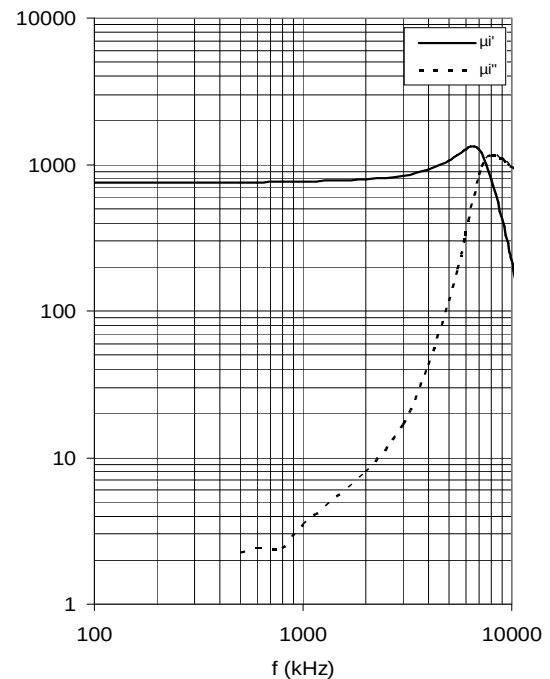


Fig.1 Complex permeability as a function of frequency

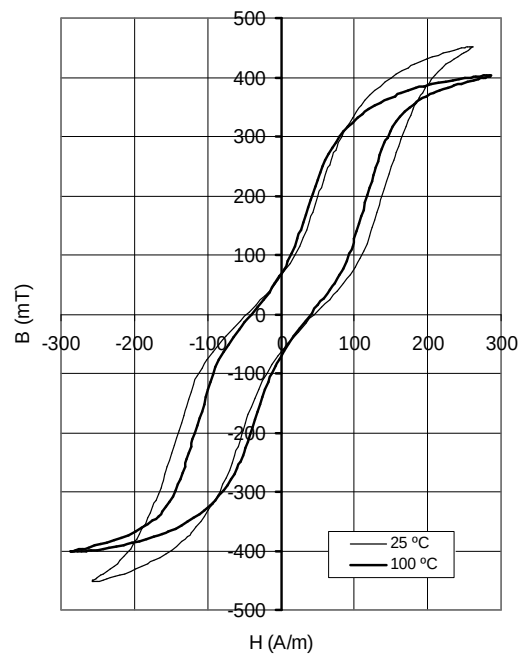


Fig.3 Typical BH loop measured at 10kHz

