DL5 高磁通耐熱衝擊材料 HIGH FLUX & THERMAL SHOCK RESISTANT FERRITE

DL5 為鎳鋅鐵氧體材料，初始導磁率（μi）約 400，飽和磁通密度（Bs）420 mT，居里溫度高於 240 ℃。具高耐溫與高磁通特性，並具有優異的耐熱衝擊與耐焊性能。適用於高功率寬頻電感、EMI 濾波器及耐高溫共模扼流圈，尤其適合長時間運行於高溫環境的 SMD 電源模組。作為功率電感材料，特別適合中高頻、高電流及耐高溫的工業與車規級應用。

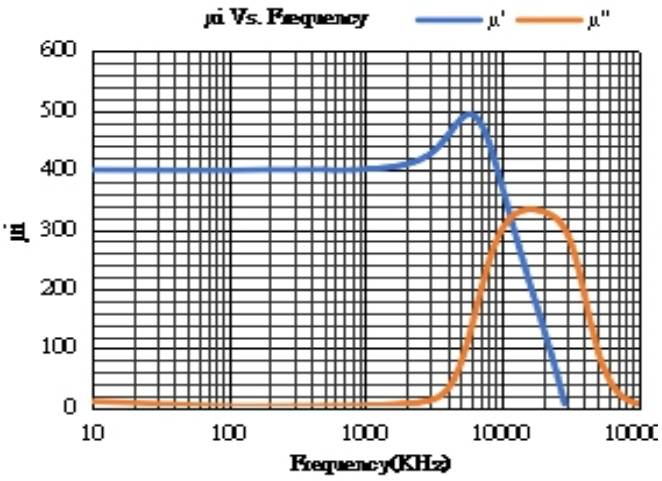
DL5 is a NiZn ferrite material with an initial permeability (μi) of about 400, a saturation flux density (Bs) of 420 mT, and a Curie temperature above 240 ℃. It features high temperature resistance and high flux capability, combined with excellent thermal shock and soldering heat resistance. Ideal for high-power wideband inductors, EMI filters, and high-temperature common-mode chokes, particularly for SMD power modules operating continuously in elevated temperatures. As a power inductor material, it is especially suited for mid-to-high frequency, high-current, and high-temperature industrial and automotive-grade applications.

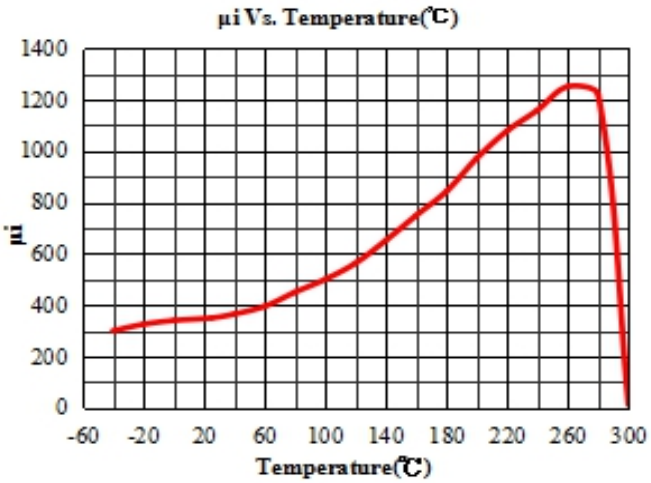
特性 CHARACTERISTICS	測試條件 CONDITION		典型值 TYPICAL VALUE	单位 UNIT
初始磁導率 u_i Initial Permeability	100KHz & <0.2mT		400±25%	
飽和磁通密度 Bs Saturation Flux Density	3000 A/m 100Hz	25℃	420	mT
		100℃	350	
殘留磁通密度 Br Remanence	3000 A/m 100Hz	25℃	280	mT
		100℃	220	
矯頑力 Hc Coercivity	3000 A/m 100Hz	25℃	25	A/m
		100℃	8	
α μ γ (溫度系數)	20-60℃		25	$x10^{-6}$
相對損失因子 Loss Factor	0.1MHz & <0.2mT		15	$x10^{-6}$
	2.0MHz & <0.2mT		40	
居禮溫度 Tc Curie Temp.	100KHz & <0.2mT		>240	℃
密度 D Density	阿基米德法 Archimedes method		5.1	g/cm^3
表面電阻 ρ Electrical Resistivity	直流电流 DC Current		10^7	Ω-m

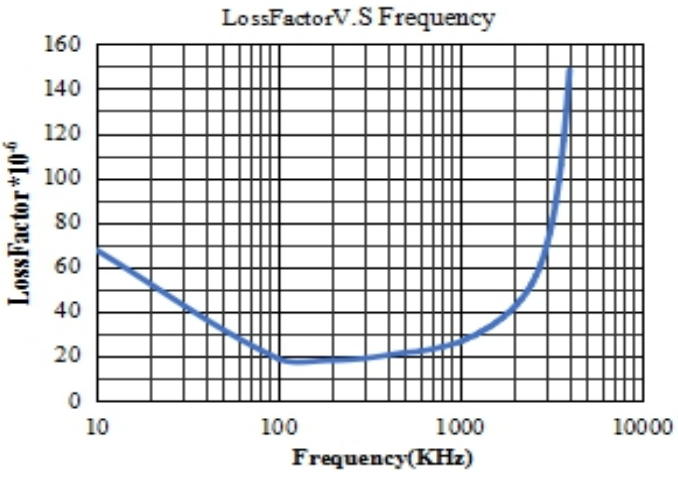
备注：各项数值均为環形磁芯 T31*19*13 测得的典型数值。由于幾何形狀和尺寸的影響，產品規格將與這些數據有所差异。

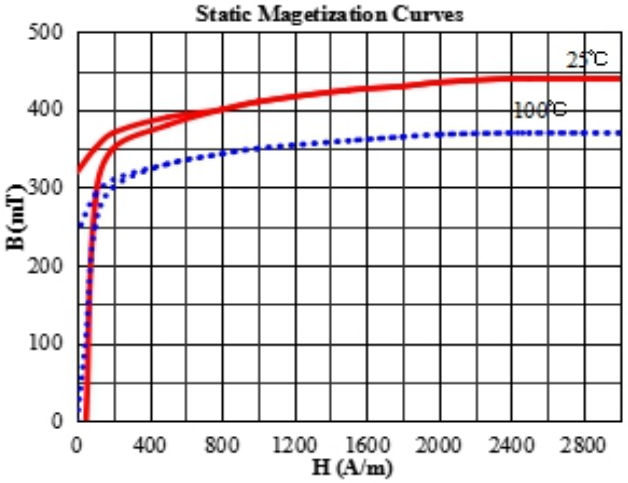
Note：All values are typical values measured for the toroidal magnetic core T31*19*13. Due to the influence of geometric shape and size, the product specifications may differ from these data.

如需更多資訊或有任何需求，請隨時與我們的業務人員聯繫。我們將竭誠為您服務。
For more information or any inquiries, please feel free to contact our sales representatives. We are dedicated to serving you.
TEL：86-762-4329901 EX.605 E-mail：sales6@takferrite.com


μi Vs. Frequency
μ'
μ"
μi
600
500
400
300
200
100
0
10
100
1000
10000
Frequency(KHz)


μi Vs. Temperature(℃)
μi
1400
1200
1000
800
600
400
200
0
-60
-20
20
60
100
140
180
220
260
300
Temperature(℃)


LossFactorV.S Frequency
LossFactor*10⁻⁶
160
140
120
100
80
60
40
20
0
10
100
1000
10000
Frequency(KHz)


Static Magetization Curves
25℃
100℃
B(mT)
500
400
300
200
100
0
0
400
800
1200
1600
2000
2400
2800
H (A/m)