

Ferrite Core Specification

Technology Dept.

NCD P/N	LP3 UU140/110/39	Customer		Spec No.			
Cus. part		Customer's P/N		Rev.No.	00	Page	1/1
				Dimensions (mm)			
				A	140.0±3.0		
				B	110.0±1.0		
				C	39.0±1.0		
				D	40.0±1.0		
				E	58.5min		
				F	70.0±1.0		
Parameter	Le=520 mm		Ae= 1537 mm ²	Ve= 799591 mm ³	m≈4000 g/prs		
Electric Charateristics	Item	Unit	Spec.	Test Condition		Instrument	
	A _L	nH/N ²	6800±25%	10kHz,0.1V,φ0.35,10Ts,23±2℃		HP4284A or eq.	
	Pc	W	16.3max	25kHz,100mT,100℃		SY-8216 or eq.	
Appearance	Item		Content				
	Clean		Appearance must be clean.No powder accretes and watermark				
	Burr		Any blighting burr was not allow existed.				
	Crack		No crack and scar affect using				
	Chips		United surface: dia.≤10.0mm ² ,2part max.No united surface: dia≤15.0mm ² , 3parts max				
	Pull-out		Pull-out area≤ 1/10				
	Crystal Grain		Dia.5.0mm max ,less than 6 parts;Dia.8.0mm max ,less than 4 parts				
	Distortion		Product distortion≤1.4mm				
Marking	(No Marking)						
Packing		Material	Quantity	Unit	Marks		Label
	Inner	UU140 Styrofoam	1	Prs			
	Outer	N300*200*190	3	Prs			
Test Rule	According to GB2828. Once natural project for sampling.(II)Dimensions:AQL=1.0Capability:AQL=0.65						
Customer Affirm	Customer Affirm				Design	Check	Appr.
					Date	2023-12-18	



MAANSHAN NEW CONDA MAGNETIC INDUSTRIAL CO.,LTD.

材料特性 MATERIAL CHARACTERISTICS

● LP3型功率铁氧体材料 Power ferrite material LP3

特性	符号	单位	条件	LP3
Characteristics	Symbol	Unit	Condition	
起始磁导率 Initial permeability	μ_i			2300±25%
相对损耗因数 Relative loss factor	$\tan\delta/\mu_i$	$\times 10^{-6}$	100kHz	<4
饱和磁通密度*(1194A/m) Saturation flux density*	Bs	mT	25℃	500
			100℃	390
剩磁* Remanence*	Br	mT		130
矫顽力* Coercivity*	Hc	A/m		13
功率损耗* Power loss* (f=100kHz,B=100mT)	Pcv	kW/m ³	25℃	
			80℃	90
			100℃	70
功率损耗* Power loss* (f=100kHz,B=200mT)	Pcv	kW/m ³	25℃	650
			60℃	
			80℃	450
			100℃	410
			120℃	
居里温度 Curie temperature	Tc	℃		≥215
电阻率* Resistivity*	ρ	$\Omega \cdot m$		5
密度* Density*	d	kg/m ³ ×10 ³		4.8

注： 1、如无说明，各项数值均在室温下用Φ25×Φ15×10环型磁心测得。

2、*为典型值,*¹测试条件为（f=400kHz,B=50mT），*²测试条件为（f=500kHz,B=50mT）。

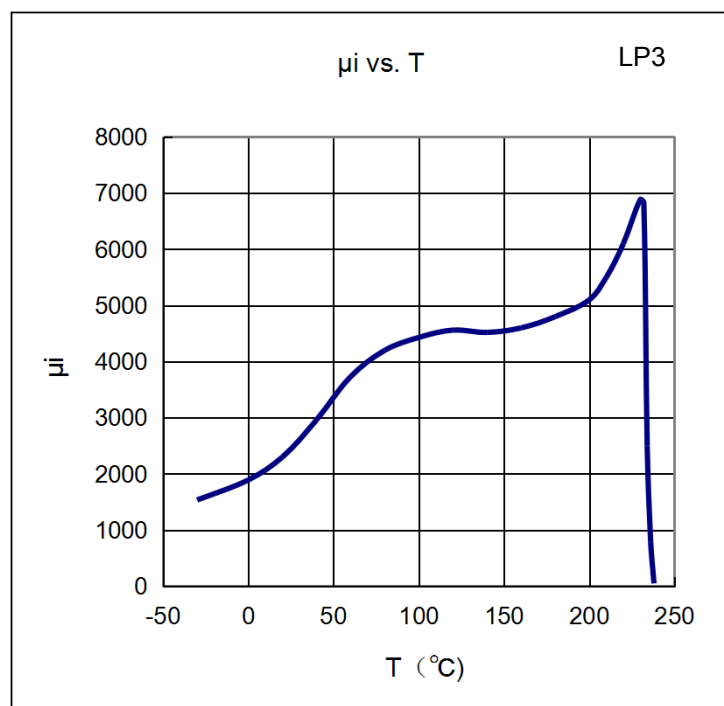
Note: 1.The values were obtained with toroidal core Φ25×Φ15×10 at room temperature unless otherwise specified.

2. * Typical value,*¹Test condition (f=400kHz,B=50mT),*²Test condition (f=500kHz,B=50mT)。

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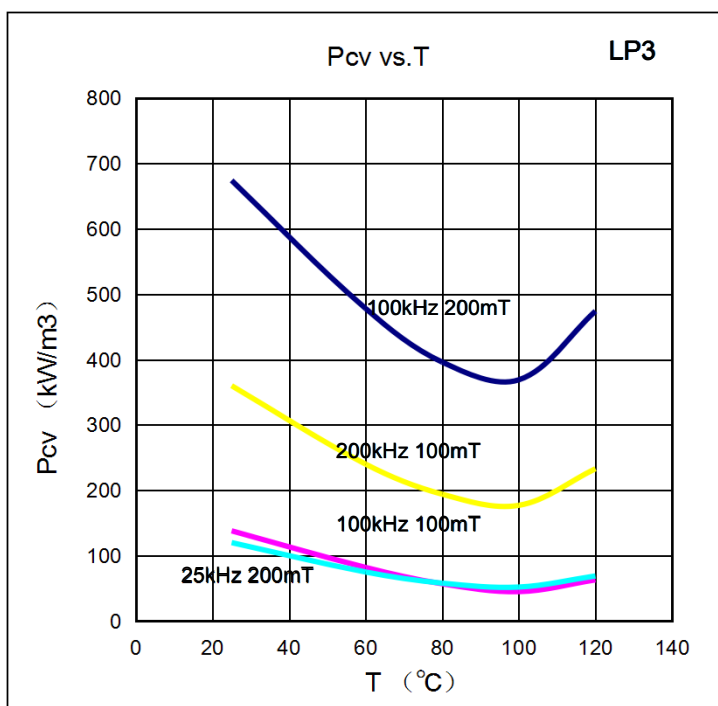
起始导磁率与温度关系

Permeability μ_i vs. Temperature T



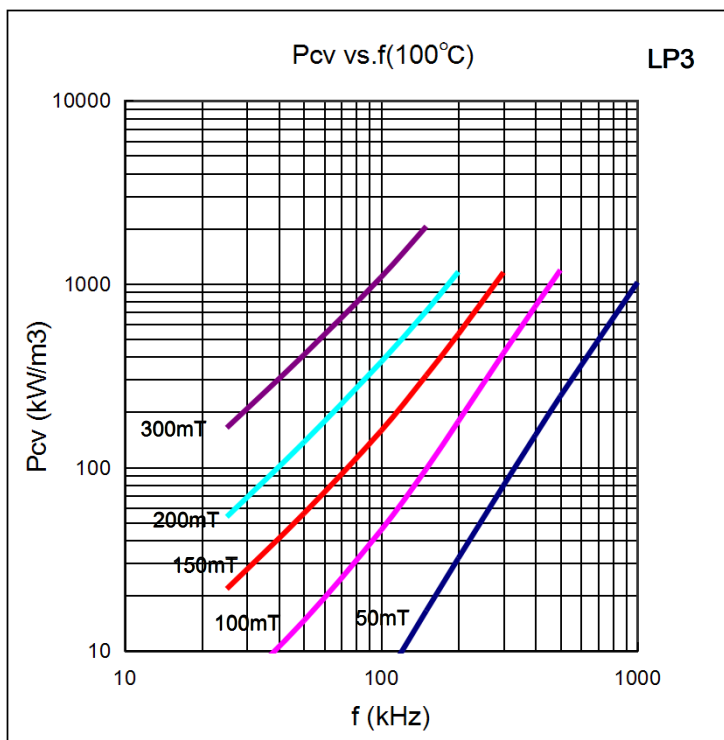
功率损耗与温度关系

Powerloss Pcv vs. Temperature



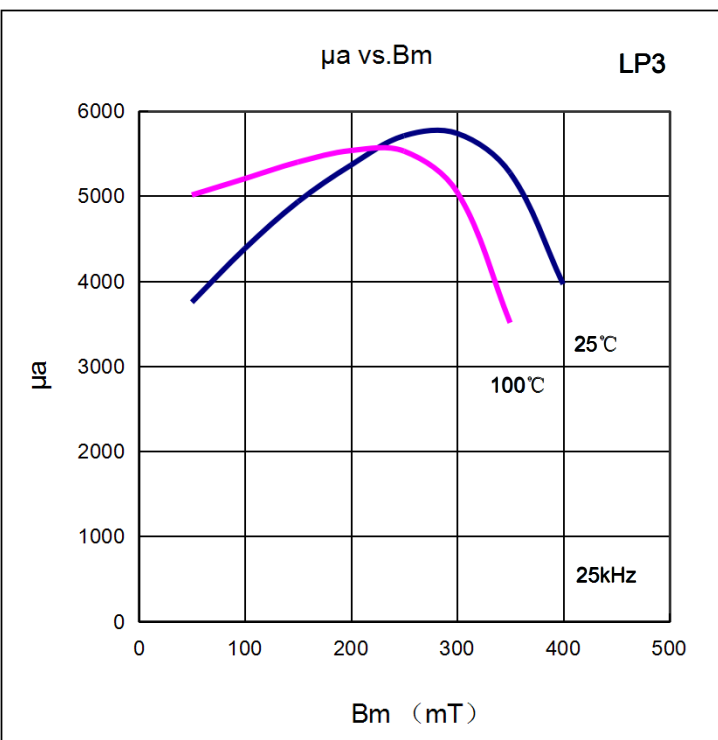
功率损耗与频率关系

Powerloss Pcv vs. frequency f



振幅磁导率与磁通密度关系

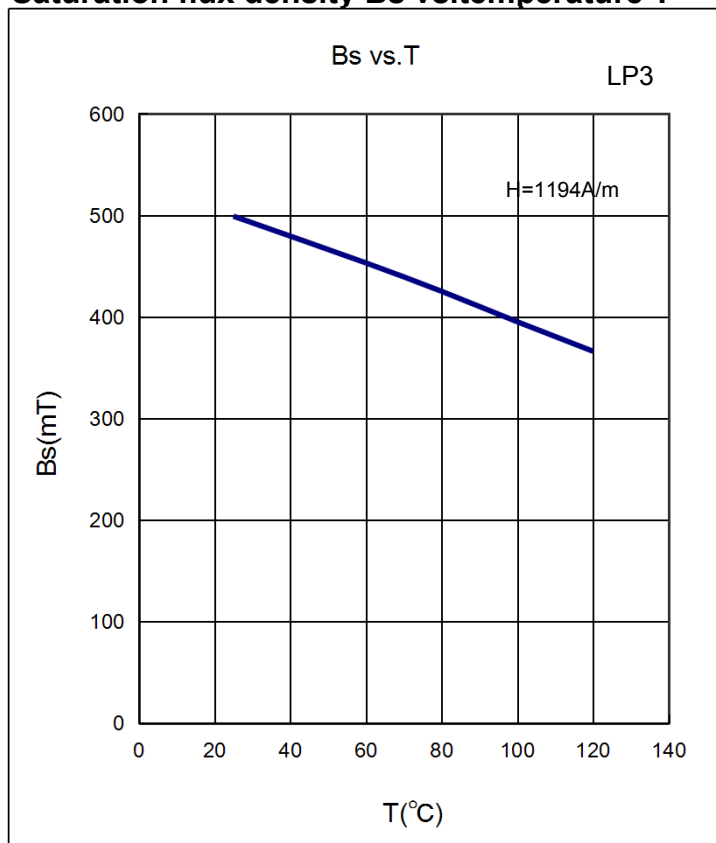
Amplitude permeability μ_a vs. flux density Bm



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饱和磁通密度与温度关系

Saturation flux density B_s vs. temperature T



磁通密度与磁场强度关系

Flux density B vs. magnetic field H

