



铁粉芯 IRON POWDER CORES

感恩付出 | 团结共赢
THANKSGIVING CONTRIBUTION
UNITY FOR WIN-WIN

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Products Characteristics 产品特性

材质性能 Material Properties

材质编号	有效磁导率(μ_e)	磁导率温度系数	线性膨胀系数	颜色	
Material Mix No.	Reference Permeability	Temp.Coef.Of Perm(+ppm/°C)	Coef.of in Expan(+ppm/°C)	Color Code)	
-2	10	100	10	Red/Clear	红/透明
-8	35	285	10	Yellow/Red	黄/红
-14	14	155	10	Black/Red	黑/红
-18	55	385	11	Green/Red	绿/红
-19	55	650	11	Red/Green	红/绿
-26	75	825	12	Yellow/White	黄/白
-28	22	510	11	Gray/Green	灰/绿
-30	22	510	11	Green/Gray	绿/灰
-33	33	665	11	Gray/Yellow	灰/黄
-34	33	565	11	Gray/Blue	灰/蓝
-35	33	665	11	Yellow/Gray	黄/灰
-38	85	955	12	Gray/Black	灰/黑
-40	60	950	11	Green/Yellow	绿/黄
-45	100	1045	12	Black/Black	黑/黑
-52	75	650	12	Green/Blue	绿/蓝

磁芯损耗对照表 Core Loss Comparison(mW/cm³)

Material Mix No.	60Hz @500Gs	1KHz @1500Gs	10KHz @500Gs	50KHz @225Gs	100KHz @140Gs	500KHz @50Gs	在DC偏流下的磁导 Permeability With DC Bias HDC=500e@10KHz	
							% μ_o	$\mu_{effective}$
-2	-	-		28	19	12	100	10
-8	45	64	59	50	35	28	91	31.9
-14	-	-		29	21	17	100	14
-18	48	72	70	63	46	37	74	40.7
-19	31	60	72	71	54	49	74	40.7
-26	32	60	75	89	83	139	51	38.3
-28	38	80	120	164	158	247	91	20
-30	37	80	120	149	129	129	91	20
-33	37	80	126	182	180	291	84	27.7
-34	29	61	87	100	82	78	84	27.7
-35	33	73	109	137	119	123	84	27.7
-38	31	57	72	99	103	217	51	43.4
-40	29	62	93	130	127	223	62	37.7
-45	26	49	60	69	61	92	46	46
-52	30	56	68	72	58	63	59	44.3

Products Characteristics 产品特性

温度特性 Temperature Characteristics

铁粉芯一般适用-65℃~+125℃的温度范围，当磁芯处于较高的温度环境中，会使电感和品质因数（Q）永久性的降低，这是由于其在制造过程中使用了有机粘结剂，如环氧树脂等；当使用温度超过150℃时，其材料内部的树脂会恶化，使磁芯的损耗增大，降低铁粉芯的使用寿命。这种特性的偏离程度取决于、温度、磁芯大小、频率和磁通密度等。

Typical operating temperature for iron powder core is between -65 °C ~ +125 °C . If the operating temperature is above 150 °C ,the organi epoxy-resin binder starts to decompose,resulting in characteristics degradation in terms of temperature rise(watt losses),DC bias as well as life time,Such pheomon really depends on operating time period,temperature,core size,switching frequency and the flux density.

表面涂层 Surface Coating

本公司生产的环形磁芯由环氧树脂涂层，涂层可抵抗大多数清洗剂的擦洗，但过度接触某些溶剂会产生不良影响，E型和U型磁芯均经过防锈处理，以防止锈蚀。表面涂层绝缘强度的测试是：将两片导电板分别放在磁粉芯的两个端面，用50Hz,1250V(AV有效电压)的测试电压，时间为5秒钟。也可以根据客户的要求提高电解质强度。

The toroidal and bus bar cores listed in this cataalogue are epoxy-ciated. All finishes can resist most cleaning solvents.Extended exposures to certain solvents may have detrimental effects.The E Cores and the U cores are treated to resist corrosion.Coating is tested at 50Hz,1250Vrms for 5 seconds to meet the minimum dielectric strength(Hi-pot test).The toroidal cores can be double or triple coated for greater dielectric strength.

磁性偏差 Magentic Tolerance

Matorial (Mix No.)	-2	-8	-14	-18	-19	-26	-28	-30	-33	-34	-35	-38	-40	-45	-52
Al Tolerance	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±10%

磁芯是按列出的AL值制造的，每种材料的磁导率仅作参考。在任何情况下，AL值均以在10KHz的频率下及10高斯(1mT)的AC通量密度峰值为依据。环型磁芯是以均匀分隔的完全单层线组作测试的，以尽量降低漏磁的影响。以非均匀分布而少圈数的铁粉磁芯作测试会产生比预期要大的电感读数。E型磁芯发100圈作为测试标准。磁力特性曲线，均有±10%的典型宽限度，而磁芯损耗特征的曲线就有±15%的典型宽限度。

Cores are manufactured based on their AL values within certain tolerance.The permeability of each material is only for reference.AL Value is tested under 10KHz and 10G(or 1mT)at all time.For toroids,winding should be fully and evenly distributed throughout the core to minimize the leakage inductance.Iron powder toroidal cores will always have higher inductance measurement reading than expected if the number of turns is low resulting in winding not evenly distributed throughout the core.For E-cores,100 turns will be used as the standard testing criteria.The typical tolerance of AL value shown above is ±10% while the tolerance of core loss curve for the above listed materials is ±15%.

材质说明 Material Description

材料-2/-14: 这种材料的磁导率低, 比其他没有附加空隙损耗的材料更能降低操作时的AC通量密度。

材料-8: 这种材料在高偏流的情况下, 磁芯损耗低, 兼且线性良好, 是良好的高频材料, 也是最贵的材料。

材料-18: 这种材料跟材料-8一样, 磁芯损耗低, 但磁导率高而成本较低, 有良好的DC饱和特性。

材料-19: 是一种可代替材料-18, 但不昂贵的选择, 而磁导率与材料-18相同, 磁芯损耗略高于材料-18。

材料-26: 最为通行的材料, 是一种成本效益高的一般用途材料, 适合功率转换和线路滤波等各种广泛用途。

材料-28/-30: 这种材料的良好线性、低成本和相对低的磁导率, 是其广泛应用于大尺寸的高功率UPS抗流器。

材料-33/-34/35: 是一种可代替材料-8, 但不昂贵的选择, 适用于高频率时磁芯损耗不重要的情况, 高偏流时线性良好。

材料-38: 是一种高磁导率、可代替材料-26的低成本选择, 最适合线性频率的应用。

材料-40: 最便宜的材料, 其特征与最通用的材料-26颇相似, 普遍应用于较大的尺寸。

材料-45: 一种磁导率最高的材料。可代替材料-52, 但磁芯损耗较高。

材料-52: 这种材料在高频率下磁芯损耗较低, 而磁导率与材料-26相同, 在新型的高频抗流器上应用广泛。

Material Description

-2/-14 Materials: The low permeability of these materials will result in lower operating AC flux density than other materials with no additional gap-loss. The -14 Material is similar to -2 Material with slightly higher permeability.

-8 Materials: This material has low core loss and good linearity under high bias conditions. A good high frequency material. The highest cost material.

-18 Materials: This material has low core loss similar to the -8 Material with higher permeability and a lower cost. Good DC saturation characteristics.

-19 Materials: An inexpensive alternate to the -18 Material with the same permeability and somewhat higher core losses.

-26 Materials: The most popular material. It is a cost effective general purpose material that is useful in a wide variety of power conversion and line filter applications.

-28/-30 Materials: The good linearity, low core, and relatively low permeability of this material make it popular in large sizes for high power UPS chokes.

-33/-34/-35 Materials: An inexpensive alternate to the -8 Material for applications where high frequency core loss is not critical. Good linearity with high bias.

-38 Materials: With its high magnetic permeability, is a low budget alternate of -26 Material. It is the best choice for linear frequency application.

-40 Materials: The least expensive material. It has characteristics quite similar to the very popular -26 Material. Popular in large sizes.

-45 Materials: The highest permeability Material. A high permeability alternate to -52 Material with slightly higher core losses.

-52 Materials: This Material has lower core loss at high frequency and the same permeability as the -26 Material. It is very popular for high frequency choke designs.

Products Characteristics 产品特性

材料用途 Material Applications

Typical Application	-2	-8	-14	-18	-19	-26	-28	-30	-33	-34	-35	-38	-40	-45	-52
Light Dimmer Chokes						X						X	X	X	
60 Hz Differential-mode EMI Line Chokes						X						X	X	X	X
DC Chokes:<50KHz or low Et/N(Buck/Boost)						X	X	X	X	X	X	X	X	X	
DC Chokes: ≥ 50KHz or higher Et/N(Buck/Boost)		X	X	X	X		X	X	X	X	X				X
Power Factor Correction Chokes:<50KHz						X	X	X	X	X	X			X	
Power Factor Correction Chokes: ≥ 50KHz	X	X	X	X	X		X	X	X	X	X				
Resonant Inductors: ≥ 50KHz	X		X												

尺寸公差 Core Tolerance(mm)

	KDM	OD	ID	HT	KDM	OD	ID	HT
	Part No.				Part NO.			
环型磁芯 Toroidal Cores	T14-T20	±0.25	±0.25	±0.25	T150-T225	±0.63	±0.63	±0.75
	T22-T38	±0.38	±0.38	±0.50	T249-T400	±0.75	±0.75	±0.75
	T40-T72	±0.50	±0.50	±0.50	T520-T650	±1.25	±1.25	±1.25
	T80-T141	±0.50	±0.50	±0.63				

公差包括涂层 Tolerance includes coating

	KDM	A	B	C	D	F	G	MAX GAP*
	Part No.							
E型磁芯 E Cores	E13-E30	±0.25	±0.25	±0.12	±0.17	±0.12	±0.17	±0.038
	E32-E41	±0.38	±0.38	±0.17	±0.25	±0.17	±0.25	±0.038
	E43-E57	±0.38	±0.38	±0.25	±0.25	±0.17	±0.25	±0.05
	E77-E114	±0.75	±0.75	±0.38	±0.50	±0.38	±0.50	±0.07
	E1155	±10	±1.0	±0.63	±0.75	±0.63	±0.75	±0.12

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

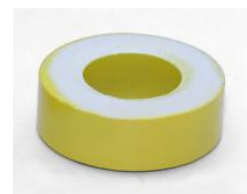
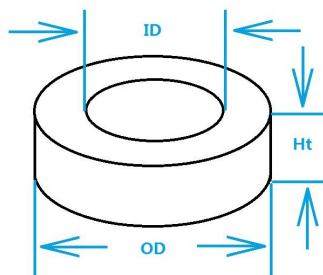
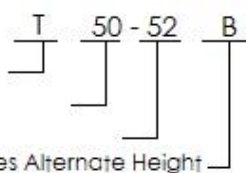
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V: 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	ℓ_e	A_e	V
	nH/N ²	in/mm	in/mm	in/mm	cm	cm ²	cm ³
T14-26A	12.5	.135/3.43	.067/1.70	.060/1.52	.810	.012	.0098
T14-45A	16.5						
T14-52A	11.5						
T16-2	2.2	.160/4.06	.078/1.98	.060/1.52	.930	.015	.014
T16-8	6.0						
T16-18	9.5						
T16-26	14.5						
T16-40	12.5						
T16-45	17.0						
T16-52	13.5						
T20-2	2.5	.200/5.08	.088/2.24	.070/1.78	1.15	.023	.026
T20-8	7.8						
T20-18	13.0						
T20-26	18.5						
T20-40	16.0						
T20-45	22.5						
T20-52	17.5						
T22-26	38.5	.223/5.66	.097/2.46	.143/3.63	1.28	.052	.067
T22-52	38.5						
T25-2	3.4	.225/6.48	.120/3.05	.096/2.44	1.50	.037	.055
T25-8	10.0						
T25-18	17.0						
T25-26	24.5						
T25-40	20.5						
T25-52	31.0						
T25-52	23.0						
T26-8	24.0	.265/6.73	.105/2.67	.190/4.83	1.47	.090	.133
T26-18	41.5						
T26-26	57.0						
T26-45	77.0						
T26-52	56.0						
T27-2	3.3	.280/7.11	.151/3.84	.128/3.25	1.71	.047	.080
T27-8	11.5						
T27-18	18.5						
T27-26	27.5						
T27-52	25.5						
T30-2	4.3	.307/7.80	.151/3.84	.128/3.25	1.84	.060	.110
T30-8	14.0						
T30-18	22.0						
T30-26	33.5						
T30-40	28.0						
T30-45	40.5						
T30-52	30.5						

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

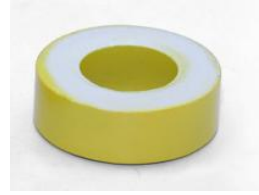
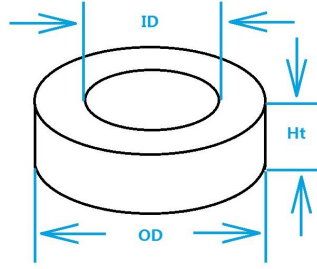
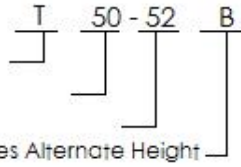
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V: 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	ℓ_e	A_e	V
	nH/N ²						
T32-52	35.0	.327/8.31	.169/4.29	.158/4.01	1.96	.073	.144
T37-2	4.0	.375/9.53	.205/5.21	.128/3.25	2.31	.064	.147
T37-8	12.0						
T37-18	19.0						
T37-19	19.0						
T37-26	28.5						
T37-40	24.5						
T37-45	34.0						
T37-52	26.0						
T38-2	7.4	.375/9.53	.175/4.45	.190/4.83	2.18	.114	.248
T38-8	20.0						
T38-18	36.0						
T38-19	36.0						
T38-26	49.0						
T38-40	41.5						
T38-45	65.0						
T38-52	49.0						
T40-26	36.0	.400/10.2	.205/5.21	.163/4.14	2.41	.093	.223
T40-52	36.0						
T44-2	5.2	.440/11.2	.229/5.82	.159/4.04	2.68	.099	.266
T44-8	18.0						
T44-14	6.2						
T44-18	25.5						
T44-19	25.5						
T44-26	37.0						
T44-40	31.0						
T44-45	46.5						
T44-52	35.0						
T44-52C	55.0						
T44-52D	70.0						
T50-2	4.9	.500/12.7	.303/7.70	.190/4.83	3.19	.112	.358
T50-8	17.5						
T50-14	5.9						
T50-18	24.0						
T50-19	24.0						
T50-26	33.0						
T50-38	37.5						
T50-40	29.5						
T50-45	44.0						
T50-52	33.0						

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

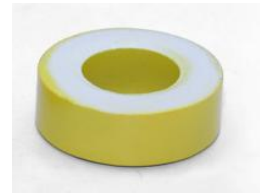
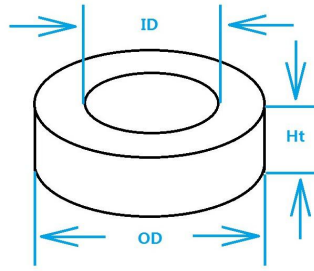
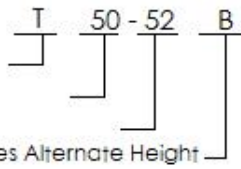
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V : 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	ℓ_e	A_e	V
	nH/N ²						
T50-8B	23.0	.500/12.7	.303/7.70	.250/6.35	3.19	.148	.471
T50-18B	32.0						
T50-19B	32.0						
T50-26B	43.5						
T50-38B	49.5						
T50-40B	38.5						
T50-45B	58.0						
T50-52B	43.5						
T50-8C	28.3	.500/12.7	.303/7.70	.335/8.51	3.19	.200	.637
T50-26C	61.0						
T50-26D	72.0						
T50-40D	59.0						
T50-52D	66.0	.500/12.7	.303/7.70	.375/9.53	3.19	.223	.711
T51-8C	37.0						
T51-18C	55.0						
T51-26C	83.0						
T51-40C	67.0						
T51-52C	75.0						
T57-45	67.0	.573/14.6	.273/6.93	.196/4.98	3.38	.178	.601
T57-52	49.5						
T57-45A	88.0						
T57-52A	66.0						
T60-2	6.5	.600/15.2	.336/8.53	.234/5.94	3.74	1.87	.699
T60-8	19.0						
T60-14	8.3						
T60-18	34.5						
T60-19	34.5						
T60-26	50.0						
T60-40	41.5						
T60-52	47.0						
T60-26D	97.0						
T60-52D	94.0						
T68-2	5.7	.690/17.5	.370/9.40	.190/4.83	4.23	.179	.759
T68-8	19.5						
T68-14	7.0						
T68-18	29.0						
T68-19	29.2						
T68-26	43.5						
T68-38	45.0						
T68-40	35.0						
T68-45	53.0						
T68-52	40.0						

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

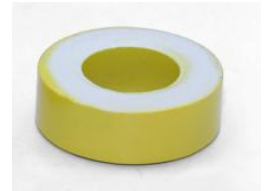
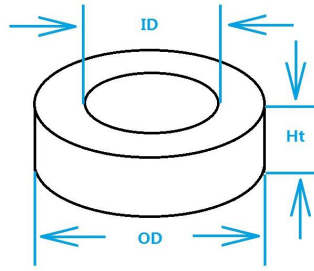
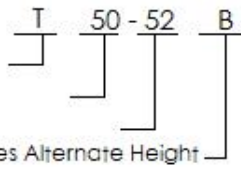
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V: 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	ℓ_e	A_e	V
	nH/N ²	in/mm	in/mm	in/mm	cm	cm ²	cm ³
T68-2A	7.0	.690/17.5	.370/9.40	.250/6.35	4.23	.242	1.03
T68-8A	26.0						
T68-14A	9.5						
T68-18A	39.5						
T68-19A	39.5						
T68-26A	58.0						
T68-38A	61.0						
T68-40A	47.0						
T68-45A	71.0						
T68-52A	54.0						
T68-2D	11.4	.690/17.5	.370/9.40	.375/9.53	4.23	.358	1.52
T68-14D	14.2						
T68-26D	87.0						
T68-40D	70.0						
T68-52D	80.0	.690/17.5	.336/8.53	.367/9.32	4.09	.394	1.61
T69-45	120.0						
T72-2	12.8	.720/18.3	.280/7.11	.260/6.60	4.01	.349	1.40
T72-8	36.0						
T72-18	60.0						
T72-26	90.0						
T72-40	71.0						
T72-52	82.0						
T80-2	5.5	.795/20.2	.495/12.6	.250/6.35	5.14	.231	1.19
T80-8	18.0						
T80-14	7.4						
T80-18	31.0						
T80-19	31.0						
T80-26	46.0						
T80-38	48.0						
T80-40	39.5						
T80-45	56.0						
T80-52	42.0						
T80-8B	29.5	.795/20.2	.495/12.6	.375/9.53	5.14	.347	1.78
T80-14B	11.0						
T80-18B	46.5						
T80-19B	46.5						
T80-26B	71.0						
T80-38B	72.0						
T80-40B	59.0						
T80-45B	84.0						
T80-52B	63.0						
T80-26D	92.0						
T80-40D	79.0						
T80-52D	83.0						

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

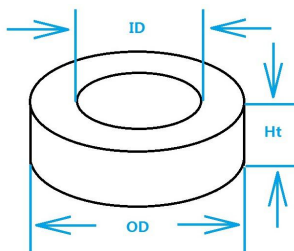
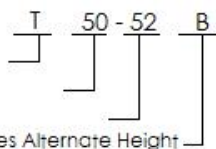
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

l_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V: 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	l_e	A_e	V
	nH/N ²	in/mm	in/mm	in/mm	cm	cm ²	cm ³
T90-8	30.0	.900/22.9	.550/14.0	.375/9.53	5.78	.395	2.28
T90-18	47.0						
T90-19	47.0						
T90-26	70.0						
T90-38	73.0						
T90-40	57.0						
T90-45	85.0						
T90-52	64.0						
T94-2	8.4	.942/23.9	.560/14.2	.312/7.92	5.97	.362	2.16
T94-8	25.0						
T94-14	10.0						
T94-18	42.0						
T94-19	42.0						
T94-26	60.0						
T94-38	65.0						
T94-40	49.0						
T94-45	76.0						
T94-52	57.0						
T95-26B	84.0	.942/23.9	.495/12.6	.375/9.53	5.72	.510	2.91
T95-52B	84.0						
T106-2	13.5	1.060/26.9	.570/14.5	.437/11.1	6.49	.659	4.28
T106-8	45.0						
T106-14	17.0						
T106-18	70.0						
T106-19	70.0						
T106-26	93.0						
T106-28	30.0						
T106-30	30.0						
T106-33	40.0						
T106-34	40.0						
T106-35	40.0						
T106-38	108.0						
T106-40	81.0						
T106-45	125.0						
T106-52	95						
T106-18A	49.0	1.060/26.9	.570/14.5	.312/7.92	6.49	.461	3.00
T106-26A	67.0						
T106-40A	58.0						
T106-52A	67.0						
T106-18B	91.0	1.060/26.9	.570/14.5	.575/14.6	6.49	.858	5.57
T106-19B	91.0						
T106-26B	124.0						
T106-40B	106.0						
T106-52B	124.0						
T124-26	58.0						
T130-2	11.0						
T130-8	35.0	1.300/33.0	.780/19.8	.437/11.1	8.28	.698	5.78
T130-14	14.0						
T130-18	58.0						
T130-19	58.0						

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

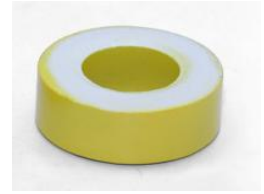
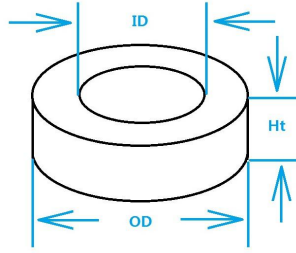
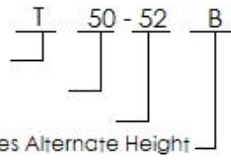
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V : 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	ℓ_e	A_e	V
	nH/N ²	in/mm	in/mm	in/mm	cm	cm ²	cm ³
T130-26	81.0	1.300/33.0	.780/19.8	.438/11.1	8.28	.698	5.78
T130-28	25.0						
T130-30	25.0						
T130-33	33.5						
T130-34	33.5						
T130-35	33.5						
T130-38	90.0						
T130-40	69.0						
T130-45	105.0						
T130-52	79.0						
T130-26A	41.0	1.300/33.0	.780/19.8	.225/5.72	8.28	.361	2.99
T130-40A	34.0						
T131-8	52.5	1.300/33.0	.640/16.3	.437/11.1	7.72	.885	6.84
T131-18	79.0						
T131-19	79.0						
T131-26	116.0						
T131-33	46.5						
T131-34	46.5						
T131-35	46.5						
T131-40	93.0						
T131-52	108.0						
T132-26	103.0						
T132-40	83.0						
T132-52	95.0						
T141-8	32.0	1.415/35.9	.880/22.4	.412/10.5	9.14	.674	6.16
T141-26	75.0						
T141-40	60.0						
T141-52	69.0						
T150-18	65.0	1.510/38.4	.845/21.5	.437/11.1	9.38	.887	8.31
T150-26	96.0						
T150-40	78.0						
T150-52	89.0						
T150-26A	66.0						
T150-38A	74.5	1.510/38.4	.845/21.5	.325/8.36	9.38	.657	6.16
T150-45A	84.0						
T157-2	14.0	1.570/39.9	.950/24.1	.570/14.5	10.1	1.06	10.7
T157-8	42.0						
T157-14	17.5						
T157-18	73.0						
T157-19	73.0						
T157-26	100.0						
T157-28	31.5						
T157-30	31.5						
T157-33	43.5						
T157-34	43.5						
T157-35	43.5						
T157-38	112.0						
T157-40	86.0						
T157-45	130.0						
T157-52	99.0						

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

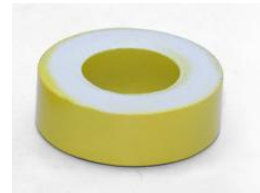
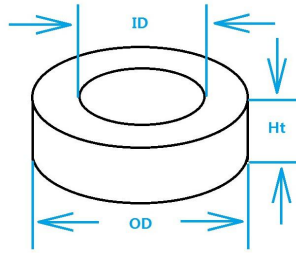
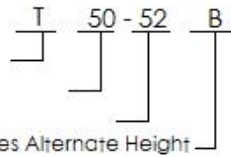
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V: 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	ℓ_e	A_e	V						
	nH/N ²	in/mm	in/mm	in/mm	cm	cm ²	cm ³						
T175-2	15.0	1.750/44.5	1.070/27.2	.650/16.5	11.2	1.34	15.0						
T175-8	48.0												
T175-18	82.0												
T175-26	105.0												
T175-40	90.0												
T175-52	105.0												
T184-2	24.0	1.840/46.7	.950/24.1	.710/18.0	11.2	1.88	21.0						
T184-8	72.0												
T184-14	28.0												
T184-18	116.0												
T184-19	116.0												
T184-26	169.0												
T184-28	51.0												
T184-30	51.0												
T184-33	70.0												
T184-34	70.0												
T184-35	70.0												
T184-40	143.0												
T184-52	159.0												
T200-2	12.0							2.000/50.8	1.250/31.8	.550/14.0	13.0	1.27	16.5
T200-8	42.5												
T200-18	67.0												
T200-19	67.0												
T200-26	92.0												
T200-33	37.0												
T200-34	37.0												
T200-35	37.0												
T200-40	79.0												
T200-52	92.0												
T200-2B	21.8	2.000/50.8	1.250/31.8	1.000/25.4	13.0	2.32	30.00						
T200-8B	78.5												
T200-18B	120.0												
T200-19B	120.0												
T200-26B	160.0												
T200-30B	51.0												
T200-35B	74.0												
T200-40B	142.0												
T200-52B	155.0												
T201-8	104.0	2.000/50.8	.950/24.1	.875/22.2	11.8	2.81	33.2						
T201-18	164.0												
T201-26	224.0												
T201-40	194.0												
T201-52	224.0												
T201-26C	155.0	2.250/57.2	1.250/31.8	.750/19.1	14.0	2.31	32.2						
T201-52C	155.0												
T225-2	12.0	2.250/57.2	1.405/35.7	.550/14.0	14.6	1.42	20.7						
T225-8	42.5												
T225-18	67.0												
T225-19	67.0												

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

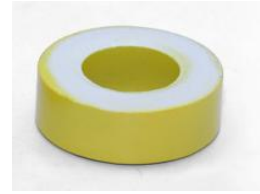
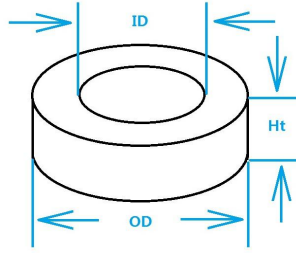
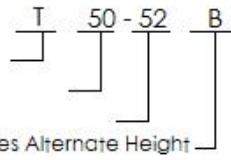
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

l_e : 平均磁路长度 (Mean Magnetic Path Length)

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V : 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	l_e	A_e	V
	nH/N ²	in/mm	in/mm	in/mm	cm	cm ²	cm ³
T225-26	98.0	2.250/57.2	1.40/35.7	.550/14.0	14.6	1.42	20.7
T225-28	28.0						
T225-30	28.0						
T225-33	37.0						
T225-34	37.0						
T225-35	37.0						
T225-40	78.0						
T225-52	92.0						
T225-2B	21.5	2.250/57.2	1.405/35.7	1.000/25.4	14.6	2.59	37.8
T225-14B	28.0						
T225-26B	160.0						
T225-34B	67.0						
T225-52B	155.0						
T249-26	203.0	2.500/63.5	1.405/35.7	1.000/25.4	15.6	3.36	52.3
T249-34	89.0						
T249-52	203.0						
T250-8	113.0	2.500/63.5	1.250/31.8	1.000/25.4	15.0	3.84	57.4
T250-14	43.0						
T250-18	177.0						
T250-19	177.0						
T250-26	242.0						
T250-30	71.0						
T250-34	106.0						
T250-40	194.0						
T250-52	242.0						
T260-18	128.0						
T260-26	175.0						
T260-28	51.0						
T260-30	51.0						
T260-33	76.5						
T260-34	76.5						
T260-35	76.5						
T260-40	140.0						
T260-52	175.0						
T300-2	11.4	3.040/77.2	1.930/49.0	.500/12.7	19.8	1.68	33.4
T300-8	37.0						
T300-18	58.0						
T300-19	58.0						
T300-26	80.0						
T300-28	23.0						
T300-30	23.0						
T300-33	34.5						
T300-34	34.5						
T300-35	34.5						
T300-40	71.0						
T300-52	80.0						

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

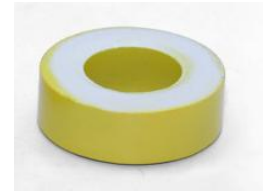
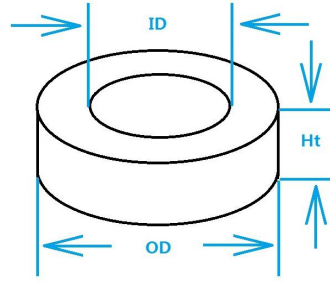
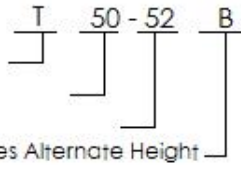
材质编码 Material Mix No.

不同高度区别码 Letter Indicates Alternate Height

l_e : 平均磁路长度 (Mean Magnetic Path Length)

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V : 磁芯体积 (Core Volume)



NO.	A_L	OD	ID	Ht	l_e	A_e	V						
	nH/N ²	in/mm	in/mm	in/mm	cm	cm ²	cm ³						
T300-2D	22.8	3.040/77.2	1.930/49.0	1.000/25.4	19.8	3.38	67.0						
T300-14D	28.0												
T300-18D	116.0												
T300-19D	116.0												
T300-26D	160.0												
T300-28D	46.0												
T300-30D	46.0												
T300-33D	69.0												
T300-34D	69.0												
T300-35D	69.0												
T300-40D	142.0												
T300-52D	160.0												
T350-18	125.0	3.500/89.0	2.140/54.4	1.000/25.4	22.5	4.39	98.0						
T350-26	171.0												
T350-28	50.0												
T350-30	50.0												
T350-33	75.0												
T350-34	75.0												
T350-35	75.0												
T350-40	137.0												
T350-52	171.0												
T400-2	18.0	4.000/102	2.250/57.2	.650/16.5	25.0	3.46	86.4						
T400-8	60.0												
T400-18	96.0												
T400-19	96.0												
T400-26	131.0												
T400-28	40.5												
T400-30	40.5												
T400-33	55.0												
T400-34	55.0												
T400-35	55.0												
T400-40	115.0												
T400-52	131.0												
T400-26B	205.0							4.000/102	2.250/57.2	1.000/25.4	25.0	5.35	133

Toroidal Cores 环型磁芯

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

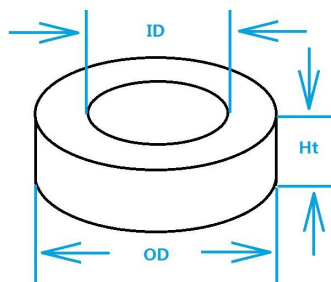
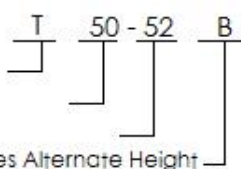
材质编码 Material Mix No.

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NO.	A_L	OD	ID	Ht	ℓ_e	A_e	V
	nH/N ²						
T400-2D	36.0	4.000/102	2.250/57.2	1.300/33.0	25.0	6.85	171
T400-14D	45.5						
T400-26D	262.0						
T400-28D	81.0						
T400-30D	81.0						
T400-33D	110.0						
T400-34D	110.0						
T400-35D	110.0						
T400-40D	230.0						
T520-2	20.0						
T520-8	65.0						
T520-26	149.0						
T520-28	45.0						
T520-30	45.0						
T520-33	65.0						
T520-34	65.0						
T520-35	65.0						
T520-40	119.0						
T520-52	137.0						
T520-28D	90.0	5.200/132	3.080/78.2	1.600/40.6	33.1	10.5	347
T520-30D	90.0						
T520-33D	130.0						
T520-34D	130.0						
T520-35D	130.0						
T520-40D	240.0						
T650-2	58.0	6.500/165	3.500/88.9	2.000/50.8	39.9	18.4	734
T650-8	200.0						
T650-26	434.0						
T650-28	127.0						
T650-30	127.0						
T650-33	191.0						
T650-34	191.0						
T650-35	191.0						
T650-40	376.0						
T650-52	405.0						

产品介绍 Introduction of products

铁粉芯的热老化问题传统铁粉芯一般是采用有机材料（如环氧树脂等）作粘合剂，由于有机材料其耐温等级较低，一般仅达到125℃左右，最大的也在150℃以下，所以采用这类粘合剂的铁粉芯做应力退火处理时，其退火温度一般都在150℃以下，故其应力消除不彻底，会造成磁性能的缺陷；同时，随着电子工业的不断发展，对高功率和高磁场强度的要求不断提高，其使用环境也越来越恶劣，元器件长时间暴露在高温环境下，这导致传统铁粉芯在使用很短一段时间后就会产生热老化的问题，磁芯的涡流损耗会加剧，从而使磁芯过热，最终导致磁芯的永久性损坏。

Thermal Aging problem of Iron Powder Cores In general,conventional iron powder cores use the organic material as binder,such as epoxy.Due to the organic material' s low resistance to high temperature,the general resin breakdown temperature is only about 125℃ to 150℃.Iron Powder cores using these binders will have their annealing temperature below 150℃.The stress force has not been eliminated completely and the cores,performance is affected. In the meantime,the demanding requirement of power and board density by electronics industry worsen the working environment.The elevated temperature operating environment causes the conventional iron powder cores to age in very short period of time.The eddy current loss will increase during the thermal aging process and cause overheating which eventually leads to the permanent damage of the core.

耐高温铁粉芯 Iron Powder Cores

材质性能 Material Properties

No.	Perm. ($\mu\epsilon$)	Core Loss(mW/cm ³)		DC-Bias(% $\mu\sigma$)		Color Code	Micrometals Mix No.	CURIE(居磁) Mix No.
		100KHz 140Gs	250KHz 300Gs	HDC-50 Oe	HDC-100 Oe			
HT-76	75	58	950	59	36	Blue/全蓝	/	75H-TAF200
HT-75	75	83	1200	51	31	Yellow/全黄	/	75H-TAF200
HT-55	55	46	650	75	50	Green/全绿	-60	55H-TAF200 SF 53-TAF200
HT-35	35	82	1500	85	68	Gray/全灰	-61	33-TAF200

表面涂层 Surface Coating

本公司生产的HT铁粉芯环型磁芯，其表面均涂有改良型的环氧树脂涂层并符合欧盟ROHS环保要求，其涂层耐温可达H级，涂层可抵抗大多数清洗剂的擦洗，但过度接触某些溶剂会产生不良影响，各种涂层在50Hz下的最小介电强度为600Vrms。

表面涂层绝缘的测试是，将两片导电板分别放在磁粉芯的两个端面，用50Hz，1250V（AC有效电压）测试电压，时间为5秒。

TYDZ HT Iron Powder Cores Series are coated by improved epoxy that can resist high temperature up to H grade. The coating also complies with the requirement of environmental protection and ROHS. The finishing has a minimum dielectric strength of 600Vrms at 50Hz and can resist most cleaning solvents. However, extended exposures to certain solvents may have detrimental effects.

The method of testing the insulation strength of the surfacing coating: put two electroplates on the corners of the cores` two surfaces, applies 50Hz, 1250Vrms and last for 5 seconds.

尺寸公差 Size Tolerance(mm)

	.	OD	ID	HT	NO.	OD	ID	HT
		环型磁芯 Toroidal Cores	T16-T20	±0.25	±0.25	±0.25	T150-T225	±0.63
	T25-T38	±0.38	±0.38	±0.50	T249-T400	±0.75	±0.75	±0.75
	T40-T72	±0.50	±0.50	±0.50	T520-T650	±1.25	±1.25	±1.25
	T80-T141	±0.50	±0.50	±0.63				

耐高温铁粉芯 Iron Powder Cores

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

材质编码 Material Mix No.

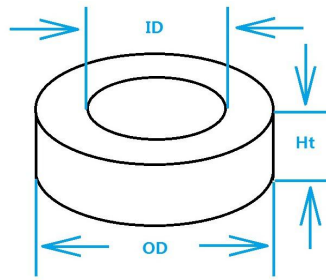
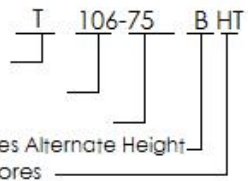
不同高度区别码 Letter Indicates Alternate Height

耐高温铁粉芯 Iron Powder Cores

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V: 磁芯体积 (Core Volume)



NO.	OD	ID	Ht	ℓ_e	A_e	V	A_L (nH/N ²) $\pm 10\%$			
	in/mm	in/mm	in/mm	cm	cm ²	cm ³	76	75	55	35
T16	.160/4.06	.078/1.98	.060/1.52	.930	.015	.014	13.5	14.5	9.5	6.0
T20	.200/5.08	.088/2.24	.070/1.78	1.15	.023	.026	17.5	18.5	13.0	7.8
T25	.225/6.48	.120/3.05	.096/2.44	1.50	.037	.055	23.0	24.5	17.0	10.0
T26	.265/6.73	.105/2.67	.190/4.83	1.47	.090	.133	56.0	57.0	41.5	24.0
T27	.280/7.11	.151/3.84	.128/3.25	1.71	.047	.080	25.5	27.5	18.5	11.5
T30	.307/7.80	.151/3.84	.128/3.25	1.84	.060	.110	30.5	33.5	22.0	14.0
T37	.375/9.53	.205/5.21	.128/3.25	2.31	.064	.147	26.0	28.5	19.0	12.0
T38	.375/9.53	.175/4.45	.190/4.83	2.18	.114	.248	49.0	49.0	36.0	20.0
T40	.400/10.2	.205/5.21	.163/4.14	2.41	.093	.223	36.0	36.0	26.0	16.5
T44	.440/11.2	.229/5.82	.159/4.04	2.68	.099	.266	35.0	37.0	25.5	18.0
T44D	.440/11.2	.229/5.82	.338/8.59	2.68	.212	.567	70.0	72.0	51.5	33.0
T50	.500/12.7	.303/7.7	.190/4.83	3.19	.112	.358	33.0	33.0	24.0	17.5
T50B	.500/12.7	.303/7.7	.250/6.35	3.19	.148	.471	43.5	43.5	32.0	23.0
T50C	.500/12.7	.303/7.7	.335/8.51	3.19	.200	.3637	59.0	61.0	43.0	28.3
T50D	.500/12.7	.303/7.7	.375/9.53	3.19	.223	.711	66.0	72.0	48.5	31.0
T51C	.500/12.7	.200/5.08	.250/6.35	2.79	.223	.622	75.0	83.0	55.0	37.0
T60	.600/15.2	.336/8.53	.234/5.94	3.74	.187	.699	47.0	50.0	34.5	19.0
T60D	.600/15.2	.336/8.53	.470/11.9	3.74	.374	1.400	94.0	97.0	69.0	44.0
T68	.690/17.5	.370/9.40	.190/4.83	4.23	.179	.759	40.0	43.5	29.0	19.5

耐高温铁粉芯 Iron Powder Cores

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

材质编码 Material Mix No.

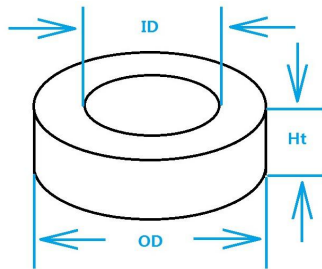
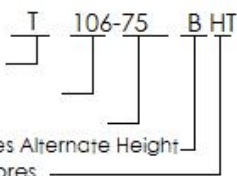
不同高度区别码 Letter Indicates Alternate Height

耐高温铁粉芯 Iron Powder Cores

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V: 磁芯体积 (Core Volume)



NO.	OD	ID	Ht	ℓ_e	A_e	V	A_L (nH/N ²) $\pm 10\%$			
	in/mm	in/mm	in/mm	cm	cm ²	cm ³	76	75	55	35
T68A	.690/17.5	.370/9.40	.250/6.35	4.23	.242	1.03	54.0	58.0	39.5	26.0
T68D	.690/17.5	.370/9.40	.375/9.53	4.23	.358	1.52	80.0	87.0	59.0	38.0
T72	.720/18.3	.280/7.11	.260/6.60	4.01	.349	1.40	82.0	90.0	60.0	36.0
T80	.795/20.2	.495/12.6	.250/6.35	5.14	.231	1.19	42.0	46.0	31.0	18.0
T80B	.795/20.2	.495/12.6	.375/9.53	5.14	.347	1.78	63.0	71.0	46.5	29.5
T80D	.795/20.2	.495/12.6	.500/12.7	5.14	.453	2.33	83.0	92.0	61.0	44.0
T90	.900/22.9	.550/14.0	.375/9.53	5.78	.395	2.28	64.0	70.0	47.0	30.0
T94	.942/23.9	.560/14.2	.312/7.92	5.97	.362	2.16	57.0	60.0	42.0	25.0
T106	1.060/26.9	.570/14.5	.437/11.1	6.49	.659	4.28	95.0	93.0	70.0	45.0
T106A	1.060/26.9	.570/14.5	.312/7.92	6.49	.461	3.00	67.0	67.0	49.0	31.5
T106B	1.060/26.9	.570/14.5	.575/14.6	6.49	.858	5.57	124.0	124.0	91.0	58.0
T124	1.245/31.6	.710/18.0	.280/7.11	7.75	.459	3.55	56.0	58.0	41.0	26.0
T130	1.300/33.0	.780/19.8	.437/11.1	8.28	.698	5.78	79.0	81.0	58.0	35.0
T130A	1.300/33.0	.780/19.8	.225/5.72	8.28	.361	2.99	41.0	41.0	30.0	19.0
T131	1.300/33.0	.640/16.3	.437/11.1	7.72	.885	6.84	108.0	116.0	79.0	52.5
T132	1.300/33.0	.700/17.8	.437/11.1	7.96	.805	6.41	95.0	103.0	70.0	44.5
T141	1.415/35.9	.880/22.4	.412/10.5	9.14	.674	6.16	69.0	75.0	51.0	32.0
T150	1.510/38.4	.845/21.5	.437/11.1	9.38	.887	8.31	89.0	96.0	65.0	41.5
T150A	1.510/38.4	.845/21.5	.325/8.26	9.38	.657	6.16	66.0	66.0	48.5	31.0

耐高温铁粉芯 Iron Powder Cores

TYPICAL PART NO.

环型磁芯 Toroidal Cores

规格特称 OD in 100th inches

材质编码 Material Mix No.

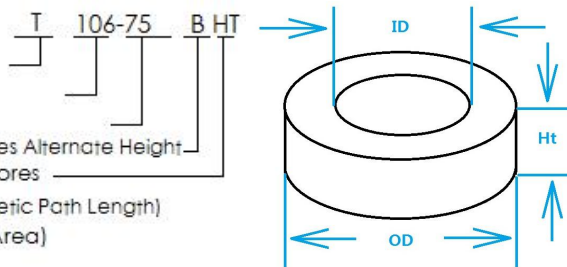
不同高度区别码 Letter Indicates Alternate Height

耐高温铁粉芯 Iron Powder Cores

ℓ_e : 平均磁路长度 (Mean Magnetic Path Length)

A_e : 横截面积 (Cross Section Area)

V: 磁芯体积 (Core Volume)



NO.	OD	ID	Ht	ℓ_e	A_e	V	$A_L(nH/N^2) \pm 10\%$			
	in/mm	in/mm	in/mm	cm	cm ²	cm ³	76	75	55	35
T157	1.570/39.9	.950/24.1	.570/14.5	10.1	1.06	10.7	99.0	100.0	73.0	42.0
T175	1.750/44.5	1.070/27.2	.650/16.5	11.2	1.34	15.0	105.0	105.0	82.0	48.0
T184	1.840/46.7	.950/24.1	.710/18.0	11.2	1.88	21.0	159.0	169.0	116.0	72.0
T200	2.000/50.8	1.250/31.8	.550/14.0	13.0	1.27	16.5	92.0	92.0	67.0	42.5
T200B	2.000/50.8	1.250/31.8	1.000/25.4	13.0	2.32	30.0	155.0	160.0	120.0	78.5
T201	2.000/50.8	.950/24.1	.875/22.2	11.8	2.81	33.2	224.0	224.0	164.0	104.0
T224C	2.250/57.2	1.250/31.8	.750/19.1	14.0	2.31	32.2	155.0	155.0	114.0	72.0
T225	2.250/57.2	1.405/35.7	.550/14.0	14.6	1.42	20.7	92.0	98.0	67.0	42.5
T225B	2.250/57.2	1.405/35.7	1.000/25.4	14.6	2.59	37.8	155.0	160.0	114.0	72.0
T249	2.500/63.5	1.405/35.7	1.000/25.4	15.6	3.36	52.3	203.0	203.0	149.0	95.0
T250	2.500/63.5	1.250/31.8	1.000/25.4	15.0	3.84	57.4	242.0	242.0	177.0	113.0
T300	3.040/77.2	1.930/49.0	.500/12.7	19.8	1.68	33.4	80.0	80.0	58.0	37.0
T300D	3.040/77.2	1.930/49.0	1.000/25.4	19.8	3.38	67.0	160.0	160.0	116.0	74.0
T350	3.500/89.0	2.140/54.4	1.000/25.4	22.5	4.39	98.0	171.0	171.0	125.0	79.0
T400	4.000/102	2.250/57.2	.650/16.5	25.0	3.46	86.4	131.0	131.0	96.0	60.0
T400D	4.000/102	2.250/57.2	1.300/33.0	25.0	6.85	171	262.0	262.0	192.0	120.0
T520	5.200/132	3.080/78.2	.800/20.3	33.1	5.24	173	137.0	149.0	100.0	68.0
T520D	5.200/132	3.080/78.2	1.600/40.6	33.1	10.5	347	274.0	298.0	200.0	130.0
T650	6.500/165	3.500/88.9	2.000/50.8	39.9	18.4	734	405.0	434.0	310.0	200.0



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