MATERIAL PROPERTIES

Material Mix number	Reference Permeability (μe)	(+PPm/℃) Temp. Coef. of Perm	Permeability With DC Bias HDC=50 Oersteds @10kHz		Color Code
			% μ_0	μ effective	
–1	20	280			Blue/Cyan
–2	10	100	100	10	Red/Gray
–2/93	10	100	100	10	Gray/Red
–3	35	370			Gray/Cyan
–6	8.5	35			Yellow/Cyan
–7	9.0	30			White/Cyan
–8	35	300	91	32	Yellow/Red
–8/93	35	300	91	32	Red/Yellow
–10	6.0	150			Black/Cyan
–15	25	190			Red/White
–18	55	385	74	41	Green/Red
–26	75	825	51	38	Yellow/White
–28	22	510	91	20	Gray/Green
–30	22	510	91	20	Green/Gray
–33	33	665	84	28	Gray/Yellow
–34	33	565	84	27.7	Gray/Blue
–35	33	665	84	27.7	Yellow/Gray
–38	85	955	51	44	Gray/Black
–40	60	950	62	37	Green/Yellow
–45	100	1040	46	46	Black/Black
–52	75	650	59	44	Green/Blue
MPP	14, 26, 60, 90, 125	60			Gray
HI–FLUX	14, 26, 60, 125	140			Blue
SENDUST	14, 26, 60, 75, 90, 125	400			Black
AMORPHOUS	26, 60, 75, 90	180			Blue

THERMAL CHARACTERISTICS

Iron Powder Cores are fitted for temperature range from –65℃ to +125℃.When cores are placed in higher temperature over 150℃, it will make inductance and quality factor(Q) to perpetually decrease. Change in this character is depended on time, temperature, core size, frequency and flux density etc.

The cores are manufactured to the AL values listed; the permeability for each material is for reference only. In all cases, the AL values are based on a peak AC flux density of gauss (1mT) at a frequencecy of 10kHz.

Typical tolerance of magnetic character curve is ± 10%, that of core loss curve is ± 15%.

The toroidal cores are tested with a even separated single–layer winding in order to minimize leakage effects.

SURFACE COATING

Toroidal iron powder cores, manufactured by this company, is well finished with protecting paint. The minimum dielectric strength of coating is 600Vrms under 50Hz. The dielectic strength also may be increased according to the needs of customer. The surface of E–shaped and I–shaped cores are treated with antirust material. We suggest the user to carefully store the untreated products to avoid moist and rain.

SPECIAL PRODUCTS

Except for the listed size in this manual, we can manufacture special products to meet the needs of customers. The listed materials in this manual can be made cores with different height, but not increase model tool. If you have any special requirements, please contact with this company.

Our normal packing box weight is 15 to 20kg/box.

MATERIAL DESCRIPTION

–2 Material The low permeability of this material will result in a lower operating AC flux density than with other material with no additional gap–loss, it is suitable for high Frequency application.

–2/93 Material with its good linearity at high bias current is a less expensive alternative for –2 Material. It is suitable for applications that care less about the high frequency core loss.

–8 Material This material has low core loss and good linearity under high bias conditions. a good high frequency material. The highest cost material.

–8/93 Material is a less expensive alternative for –8 Material, the core loss is close to –8 Material and the linearity at high bias current is very good.

–18 Material This material has low core loss similar to the –8 Material with higher permeability and a lower cost, good saturation characteristics.

–26 Material The most popular material. It is a costeffective general purpose material that is useful in a wide varity of power conversion and line filter application.

–28 Material The good linearity, low cost, and relatively low permeability of this material make it popular in the larger sizes for high power UPS chokes.

–33 Material An inexpensive alternate to the –8 Material for applications where high frequence core loss is not critical, good linearity with high bias.

–40 Material The least expensive material, It has characteristics quite similar to the very popular –26Material, popular in the larger sizes.

–45 Material The highest permeability material. a high permeability alternate to –52 Material with slightly higher core losses.

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

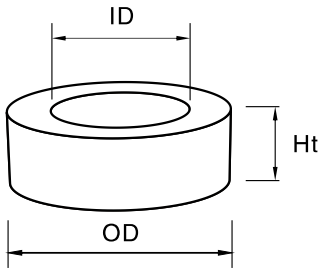
Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

- Toroidal Cores
- Core Size (inches)
- Material
- Height

Le: Mean Magetic Path Length
Ae: Cross Section Area
Ve: Core Volume



Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT14-26A	12.5	.135/3.43	.67/1.70	.60/1.52	0.81	0.012	0.0098
KT14-45A	16.5						
KT14-52A	11.5						
KT16-2	2.2	.160/4.06	.078/1.98	.060/1.52	0.93	0.015	0.014
KT16-8	6						
KT16-18	9.5						
KT16-26	14.5						
KT16-40	12.5						
KT16-45	17						
KT16-52	13.5						
KT20-2	2.5	.200/5.08	.088/2.24	.070/1.78	1.15	0.023	0.026
KT20-8	7.8						
KT20-18	13						
KT20-26	18.5						
KT20-40	16						
KT20-45	22.5						
KT20-52	17.5						
KT22-26	38.5	.223/5.66	.097/2.46	.143/3.63	1.28	0.052	0.067
KT22-52	38.5						
KT25-2	3.4	.225/6.48	.120/3.05	.096/2.44	1.5	0.037	0.055
KT25-8	10						
KT25-18	17						
KT25-26	24.5						
KT25-40	20.5						
KT25-45	31						
KT25-52	23						
KT26-8	24	.265/6.73	.105/2.67	.190/4.83	1.47	0.09	0.133
KT26-18	41.5						
KT26-26	57						
KT26-45	77						
KT26-52	56						

Toroidal Cores

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TYPICAL PART No. KT50 - 52 B

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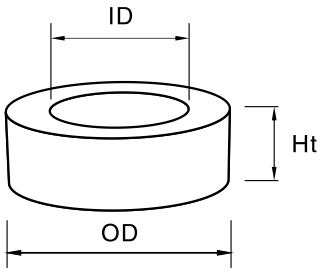

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT27-2	3.3	.280/7.11	.151/3.84	.128/3.25	1.71	0.047	0.08
KT27-8	11.5						
KT27-18	18.5						
KT27-26	27.5						
KT27-52	25.5						
KT30-2	4.3	.307/7.80	.151/3.84	.128/3.25	1.84	0.06	0.11
KT30-8	14						
KT30-18	22						
KT30-26	33.5						
KT30-40	28						
KT30-45	40.5						
KT30-52	30.5						
KT32-52	35	.327/8.31	.169/4.29	.158/4.01	1.96	0.073	0.144
KT37-2	4	.375/9.53	.205/5.21	.128/3.25	2.31	0.064	0.147
KT37-8	12						
KT37-18	19						
KT37-19	19						
KT37-26	28.5						
KT37-40	24.5						
KT37-45	34						
KT37-52	26						
KT38-2	7.4	.375/9.53	.175/4.45	.190/4.83	2.18	0.114	0.248
KT38-8	20						
KT38-18	36						
KT38-19	36						
KT38-26	49						
KT38-40	41.5						
KT38-45	65						
KT38-52	49						
KT40-26	36	.400/10.2	.205/5.21	.163/4.14	2.41	0.093	0.223
KT40-52	36						

Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

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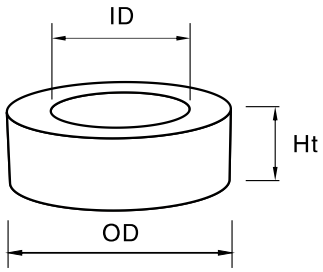

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT44-14	6.2						
KT44-18	25.5						
KT44-19	25.5						
KT44-26	37						
KT44-40	31						
KT44-45	46.5						
KT44-52	35						
KT44-52C	55	.440/11.2	.229/5.82	.250/6.35	2.68	0.157	0.419
KT44-52D	70	.440/11.2	.229/5.82	.338/8.59	2.68	0.212	0.567
KT50-2	4.9	.500/12.7	.303/7.70	.190/4.83	3.19	0.112	0.358
KT50-8	17.5						
KT50-14	5.9						
KT50-18	24						
KT50-19	24						
KT50-26	33						
KT50-38	37.5						
KT50-40	29.5						
KT50-45	44						
KT50-52	33						
KT50-8B	23	.500/12.7	.303/7.70	.250/6.35	3.19	0.148	0.471
KT50-18B	32						
KT50-19B	32						
KT50-26B	43.5						
KT50-38B	49.5						
KT50-40B	38.5						
KT50-45B	58						
KT50-52B	43.5						
KT50-8C	28.3	.500/12.7	.303/7.70	.335/8.51	3.19	0.2	0.637
KT50-26C	61						
KT50-26D	72	.500/12.7	.303/7.70	.375/9.53	3.19	0.223	0.711
KT50-40D	59						

Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

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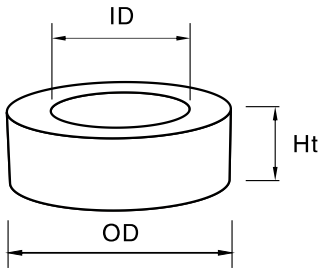

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT50-52D	66						
KT51-8C	37	.500/12.7	.200/5.08	.250/6.35	2.79	0.223	0.622
KT51-18C	55						
KT51-26C	83						
KT51-40C	67						
KT51-52C	75						
KT57-45	67	.573/14.6	.273/6.93	.196/4.98	3.38	0.178	0.601
KT57-52	49.5						
KT57-45A	88	.573/14.6	.273/6.93	.263/6.68	3.38	0.239	0.805
KT57-52A	66						
KT60-2	6.5	.600/15.2	.336/8.53	.234/5.94	3.74	0.187	0.699
KT60-8	19						
KT60-14	8.3						
KT60-18	34.5						
KT60-19	34.5						
KT60-26	50						
KT60-40	41.5						
KT60-52	47						
KT60-26D	97	.600/15.2	.336/8.53	.470/11.9	3.74	0.374	1.4
KT60-52D	94						
KT68-2	5.7	.690/17.5	.370/9.40	.190/4.83	4.23	0.179	0.759
KT68-8	19.5						
KT68-14	7						
KT68-18	29						
KT68-19	29						
KT68-26	43.5						
KT68-38	45						
KT68-40	35						
KT68-45	53						
KT68-52	40						
KT68-2A	7	.690/17.5	.370/9.40	.250/6.35	4.23	0.242	1.03

Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

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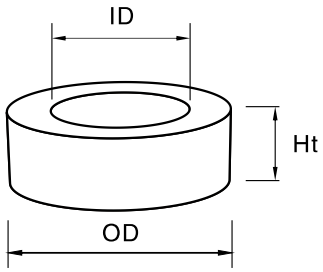

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT68-19A	39.5						
KT68-26A	58						
KT68-38A	61						
KT68-40A	47						
KT68-45A	71						
KT68-52A	54						
KT68-2D	11.4	.690/17.5	.370/9.40	.375/9.53	4.23	0.358	1.52
KT68-14D	14.2						
KT68-26D	87						
KT68-40D	70						
KT68-52D	80						
KT69-45	120	.690/17.5	.336/8.53	.367/9.32	4.09	0.394	1.61
KT72-2	12.8	.720/18.3	.280/7.11	.260/6.60	4.01	0.349	1.4
KT72-8	36						
KT72-18	60						
KT72-26	90						
KT72-40	71						
KT72-52	82						
KT80-2	5.5	.795/20.2	.495/12.6	.250/6.35	5.14	0.231	1.19
KT80-8	18						
KT80-14	7.4						
KT80-18	31						
KT80-19	31						
KT80-26	46						
KT80-38	48						
KT80-40	39.5						
KT80-45	56						
KT80-52	42						
KT80-8B	29.5	.795/20.2	.495/12.6	.375/9.53	5.14	0.347	1.78
KT80-14B	11						
KT80-18B	46.5						

Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

- Toroidal Cores
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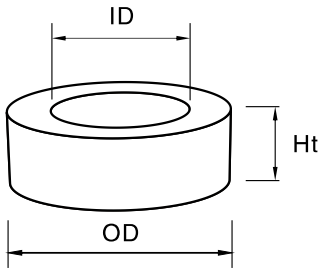

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT106-33	40						
KT106-34	40						
KT106-35	40						
KT106-38	108						
KT106-40	81						
KT106-45	125						
KT106-52	95						
KT106-18A	49	1.060/26.9	.570/14.5	.312/7.92	6.49	0.461	3
KT106-26A	67						
KT106-40A	58						
KT106-52A	67						
KT106-18B	91	1.060/26.9	.570/14.5	.575/14.6	6.49	0.858	5.57
KT106-19B	91						
KT106-26B	124						
KT106-40B	106						
KT106-52B	124						
KT124-26	58	1.245/31.6	.710/18.0	.280/7.11	7.75	0.459	3.55
KT130-2	11	1.300/33.0	.780/19.8	.437/11.1	8.28	0.698	5.78
KT130-8	35						
KT130-14	14						
KT130-18	58						
KT130-19	58						
KT130-26	81	1.300/33.0	.780/19.8	.438/11.1	8.28	0.698	5.78
KT130-28	25						
KT130-30	25						
KT130-33	33.5						
KT130-34	33.5						
KT130-35	33.5						
KT130-38	90						
KT130-40	69						
KT130-45	105						

Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

- Toroidal Cores
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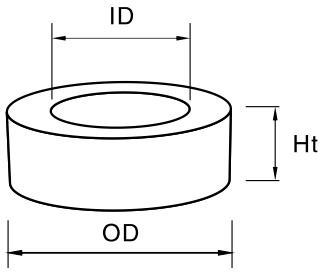

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT131-8	52.5	1.300/33.0	.640/16.3	.437/11.1	7.72	0.885	6.84
KT131-18	79						
KT131-19	79						
KT131-26	116						
KT131-33	46.5						
KT131-34	46.5						
KT131-35	46.5						
KT131-40	93						
KT131-52	108						
KT132-26	103	1.300/33.0	.700/17.8	.437/11.1	7.96	0.805	6.41
KT132-40	83						
KT132-52	95						
KT141-8	32	1.415/35.9	.880/22.4	.412/10.5	9.14	0.674	6.16
KT141-26	75						
KT141-40	60						
KT141-52	69						
KT150-18	65	1.510/38.4	.845/21.5	.437/11.1	9.38	0.887	8.31
KT150-26	96						
KT150-40	78						
KT150-52	89						
KT150-26A	66	1.510/38.4	.845/21.5	.325/8.26	9.38	0.657	6.16
KT150-38A	74.5						
KT150-45A	84						
KT157-2	14	1.570/39.9	.950/24.1	.570/14.5	10.1	1.06	10.7
KT157-8	42						
KT157-14	17.5						
KT157-18	73						
KT157-19	73						
KT157-26	100						
KT157-28	31.5						
KT157-30	31.5						

Toroidal Cores

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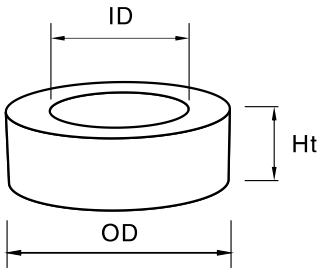

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT157-38	112						
KT157-40	86						
KT157-45	130						
KT157-52	99						
KT175-2	15	1.750/44.5	1.070/27.2	.650/16.5	11.2	1.34	15
KT175-8	48						
KT175-18	82						
KT175-26	105						
KT175-40	90						
KT175-52	105						
KT184-2	24	1.840/46.7	.950/24.1	.710/18.0	11.2	1.88	21
KT184-8	72						
KT184-14	28						
KT184-18	116						
KT184-19	116						
KT184-26	169						
KT184-28	51						
KT184-30	51						
KT184-33	70						
KT184-34	70						
KT184-35	70						
KT184-40	143						
KT184-52	159						
KT200-2	12	2.000/50.8	1.250/31.8	.550/14.0	13	1.27	16.5
KT200-8	42.5						
KT200-18	67						
KT200-19	67						
KT200-26	92						
KT200-33	37						
KT200-34	37						
KT200-35	37						

Toroidal Cores

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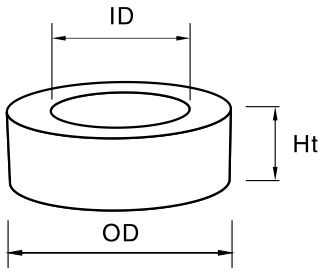

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT200-2B	21.8	2.000/50.8	1.250/31.8	1.000/25.4	13	2.32	30
KT200-8B	78.5						
KT200-18B	120						
KT200-19B	120						
KT200-26B	160						
KT200-30B	51						
KT200-35B	74						
KT200-40B	142						
KT200-52B	155						
KT201-8	104	2.000/50.8	.950/24.1	.875/22.2	11.8	2.81	33.2
KT201-18	164						
KT201-26	224						
KT201-40	194						
KT201-52	224						
KT224-26C	155	2.250/57.2	1.250/31.8	.750/19.1	14	2.31	32.2
KT224-52C	155						
KT225-2	12	2.250/57.2	1.405/35.7	.550/14.0	14.6	1.42	20.7
KT225-8	42.5						
KT225-18	67						
KT225-19	67						
KT225-26	98	2.250/57.2	1.405/35.7	.550/14.0	14.6	1.42	20.7
KT225-28	28						
KT225-30	28						
KT225-33	37						
KT225-34	37						
KT225-35	37						
KT225-40	78						
KT225-52	92						
KT225-2B	21.5	2.250/57.2	1.405/35.7	1.000/25.4	14.6	2.59	37.8
KT225-14B	28						
KT225-26B	160						

Toroidal Cores

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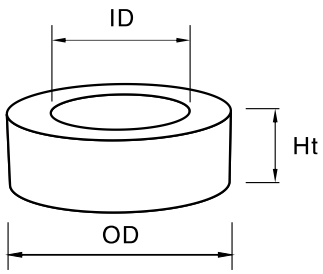


Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT249-34	89						
KT249-52	203						
KT250-8	113	2.500/63.5	1.250/31.8	1.000/25.4	15	3.84	57.4
KT250-14	43						
KT250-18	177						
KT250-19	177						
KT250-26	242						
KT250-30	71						
KT250-34	106						
KT250-40	194						
KT250-52	242						
KT260-18	128	2.670/67.9	1.600/40.7	1.000/25.4	17.1	3.45	59
KT260-26	175						
KT260-28	51						
KT260-30	51						
KT260-33	76.5						
KT260-34	76.5						
KT260-35	76.5						
KT260-40	140						
KT260-52	175						
KT300-2	11.4	3.040/77.2	1.930/49.0	.500/12.7	19.8	1.68	33.4
KT300-8	37						
KT300-18	58						
KT300-19	58						
KT300-26	80						
KT300-28	23						
KT300-30	23						
KT300-33	34.5						
KT300-34	34.5						
KT300-35	34.5						
KT300-40	71						

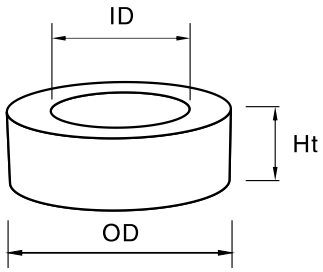
Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

- Toroidal Cores
- Core Size (inches)
- Material
- Height

Le: Mean Magetic Path Length
Ae: Cross Section Area
Ve: Core Volume



Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT300-18D	116						
KT300-19D	116						
KT300-26D	160						
KT300-28D	46						
KT300-30D	46						
KT300-33D	69						
KT300-34D	69						
KT300-35D	69						
KT300-40D	142						
KT300-52D	160						
KT350-18	125	3.500/89.0	2.140/54.4	1.000/25.4	22.5	4.39	98
KT350-26	171						
KT350-28	50						
KT350-30	50						
KT350-33	75						
KT350-34	75						
KT350-35	75						
KT350-40	137						
KT350-52	171						
KT400-2	18	4.000/102	2.250/57.2	.650/16.5	25	3.46	86.4
KT400-8	60						
KT400-18	96						
KT400-19	96						
KT400-26	131						
KT400-28	40.5						
KT400-30	40.5						
KT400-33	55						
KT400-34	55						
KT400-35	55						
KT400-40	115						
KT400-52	131						

Toroidal Cores

IRON POWDER CORES SERIES

TYPICAL PART No. KT50 - 52 B

- Toroidal Cores
- Core Size (inches)
- Material
- Height

Le: Mean Magetic Path Length
Ae: Cross Section Area
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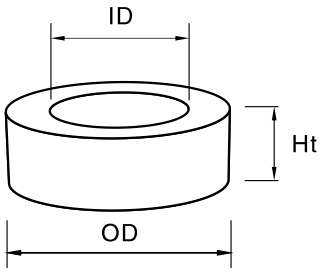

Part Number	A_L nH/N²	OD in/mm	ID in/mm	Ht in/mm	le cm	Ae cm²	V cm³
KT400-26D	262						
KT400-28D	81						
KT400-30D	81						
KT400-33D	110						
KT400-34D	110						
KT400-35D	110						
KT400-40D	230						
KT520-2	20	5.200/132	3.080/78.2	.800/20.3	33.1	5.24	173
KT520-8	65						
KT520-26	149						
KT520-28	45						
KT520-30	45						
KT520-33	65						
KT520-34	65						
KT520-35	65						
KT520-40	119						
KT520-52	137						
KT520-28D	90	5.200/132	3.080/78.2	1.600/40.6	33.1	10.5	347
KT520-30D	90						
KT520-33D	130						
KT520-34D	130						
KT520-35D	130						
KT520-40D	240						
KT650-2	58	6.500/165	3.500/88.9	2.000/50.8	39.9	18.4	734
KT650-8	200						
KT650-26	434						
KT650-28	127						
KT650-30	127						
KT650-33	191						
KT650-34	191						
KT650-35	191						
KT650-40	376						
KT650-52	405						