



HPL, TFL series, high-precision, thin-film chip inductors.



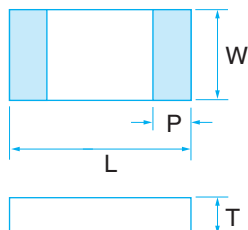
These 0805, 0402 and 0201 size chip inductors are adjustment free due to their tight tolerance. Additionally, this part also offers a high self-resonance frequency of 1 GHz and high Q value and a very excellent rated current.

RoHS compliant

Completely lead free

SPECIFICATIONS

Mechanical



Dimension (Inch Size)	HPL0603 (0201)	HPL1005 TFL0510 (0402)	TFL0816 (0603)
L	0.60±0.05	1.00±0.10	1.60±0.10
W	0.30±0.05	0.50±0.10	0.80±0.10
P	0.07±0.05	0.15±0.10	0.30±0.20
T	0.28±0.05	0.40±0.10	0.45±0.10

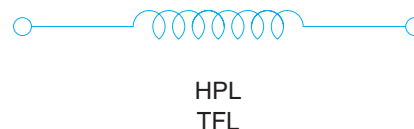
(unit : mm)

Electrical

Type	HPL0603		HPL1005	
inductance value	E-24		E-24	
inductance range (nH)	1.0~5.6	6.8~27	1.0~9.1	10~39
inductance tolerance	±0.1nH, ±0.2nH	±2%	±0.1nH, ±0.2nH	±2%
Q value (at 300MHz)	10	8~10	20~15	15~13
Q value (at 800MHz) typ.	14~17	14~16	35~25	25~20
Q value (at 1.5GHz) typ.	18~25	18~20	50~30	30~25
Self resonance Frequency(GHz)	10~6.0	3.5	7.0~4.0	3.5
DC resistance(Ω)	0.1~0.8	0.8~1.5	0.01~0.4	0.5~0.8
Rated Current(A)	0.5~0.2	0.2~0.15	1.8~0.34	0.3~0.24
Package	10,000pcs/reel			

Measured at 500MHz in case of HPL0603, at 300MHz in case of HPL1005

Equivalent circuit



Type	TFL0510						TFL0816				
inductance value	E-24						E-12				
inductance range (nH)	1.0~1.2	1.3~2.2	2.4~3.9	4.3~9.1	10~16	18~39	1.0~4.7	5.6~8.2	10~27	33~68	82~100
inductance tolerance	±0.1nH,±0.2nH		±0.2nH		±2%	±3%	±0.2nH		±2%	±2%	
Q value (at 300MHz)	10					*10	20	15	15	*15	*10
Q value (at 800MHz) typ.	21						34~30		30~25	25	15
Q value (at 1.5GHz) typ.	25			25~20	20	**20	38~35		35~30	**	
Self resonance Frequency(GHz)	7.0			5.5~4.0	4.0	2.0~1.5	6.0~5.0	5.0~4.0	4.0~2.0	1.5~1.0	1.0
DC resistance(Ω)	0.1	0.15~0.20	0.20~0.40	0.60~1.50	1.50~2.55	2.55~4.00	0.10~0.25	0.50	1.0~2.0	2.0~4.5	6.0~8.5
Rated Current(A)	1.2	0.93~0.60	0.58~0.42	0.34~0.21	0.21~0.16	0.16~0.12	1.0~0.6	0.40	0.3~0.2	0.2~0.14	0.12~0.1
Package	10,000pcs/reel						5,000pcs/reel				

* Measured at 200MHz in case of 33,36,39nH(TFL0510) and 33-100nH(TFL0816)

** No measuring in case of 33,36,39nH(TFL0510) and 33-100nH(TFL0816)

PART NUMBER

HPL 0603 - 1NO (-E02)

Superior tolerance (ME6=TFL0510±0.1nH,
E02=HPL series in superior tolerance)
Inductance value
Dimensions
Part Code