

PTIS Series

Range of Size: (0201(0603)~0402(1005))

Test Equipment: HP4287A + Agilent16196C - for "PTIS0603" series

HP4287A + Agilent16196B - for "PTIS1005" series

Operating Temperature: -40 ~+85



Introduction

- > Thin Film technology allows for the deposition of low ESR line width structures to the micron and below level.
- > As RF frequencies increase, lower-value inductors become the more necessary in circuit design.
- > The tight tolerance and elect. characteristics of thinfilm inductors in pre- and post- processing with outstanding stability in application.
- > The low height of thinfilm devices enables them to withstand high G forces and vibration maintaining high degree of electrical stability.
- > Thinfilm inductors are highly stable in environmental extremes of temperature, humidity, moisture and time.
- > Due to frequency spectrum crowding, narrow band circuit needs and maximum useable frequency band increases; thinfilm inductors usage is dramatically increasing.

Applications

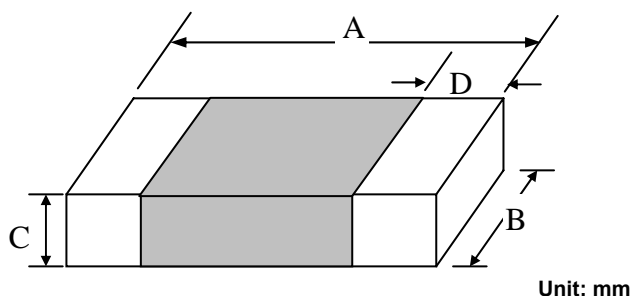
- > VCO, TCXO Circuit and RF Transceiver Module.
- > Wireless LAN, Bluetooth Module, Communication Appliances.
- > Cellular Telephone, Pagers and GPS Products.

Features

- > Photo lithographic single layer ceramic chip.
- > High SRF, excellent Q, superior temperature stability.
- > Tight tolerance of $\pm 1\%$ or $\pm 0.1nH$.
- > Self resonant frequency controlled within 10%.
- > Stable inductance in high frequency circuit.
- > Highly stable design for critical needs.

General Dimensions and Configuration

SHAPE:



DIMENSIONS:

SERIES	A (m/m)	B (m/m)	C (m/m)	D (m/m)	Net Weight (mg)
PTIS0603	0.60±0.05	0.30±0.05	0.23±0.05	0.15±0.05	0.23
PTIS1005	1.00±0.05	0.50±0.05	0.32±0.05	0.20±0.10	0.90

PTIS Series

Range of Size: (0201(0603)~0402(1005))

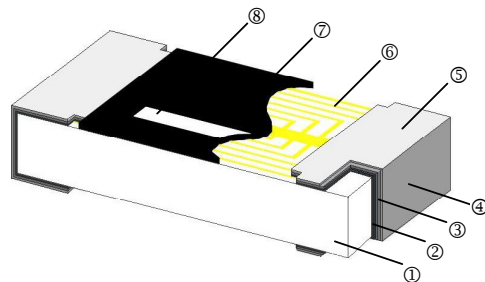
Test Equipment: HP4287A + Agilent16196C - for "PTIS0603" series
HP4287A + Agilent16196B - for "PTIS1005" series

Operating Temperature: -40 ~+85

Inductance, SRF, Q and Rated Current ranges

SERIES	Inductance (nH)	SRF (Min.) (GHz)	Q (Min.)	I (Rated) (mA)
PTIS0603	0.10~10.0	9.00~2.00	8	400~80
PTIS1005	0.20~33.0	14.00~2.50	13	800~75

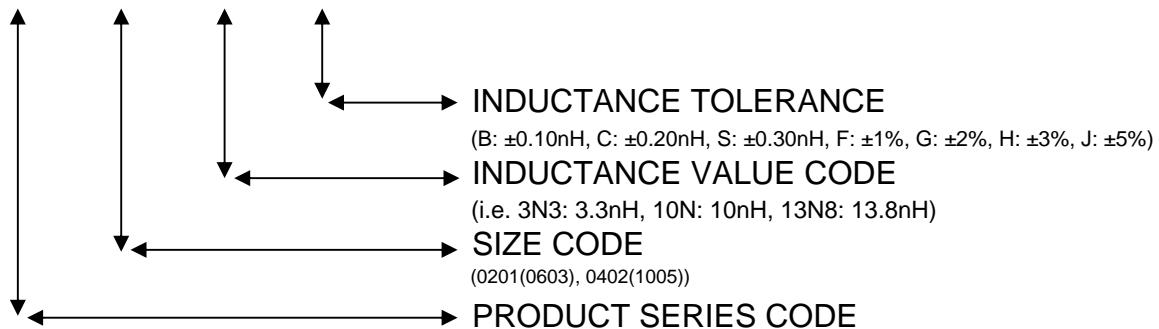
Construction



- (1). Alumina Substrate
- (2). Inner Electrode (Ni-Cr)
- (3). Barrier Layer (Ni)
- (4). External Electrode (Sn)
- (5). Edge Electrode
- (6). Cu Circuits
- (7). Overcoat
- (8). Marking (no marking for PTIS0603 series)

Part Numbering Systems

PTIS 1005-3N3 B



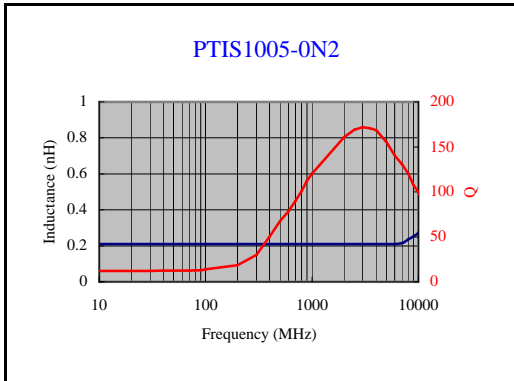
PTIS1005 Series (Size: 0402 (1005))**Electrical Characteristics**

Part No.	L (nH) @ _MHz	Inductance Tolerance (±% or ±nH)	Q (Min.) @ _MHz	DCR Ω (Max.)	Rated Current (mA) (Max.)	SRF (Min.) (GHz)
PTIS1005-0N2	0.2 @ 500	0.1/0.2/0.3nH	13 @ 500	0.10	800	14
PTIS1005-0N3	0.3 @ 500	0.1/0.2/0.3nH	13 @ 500	0.10	800	14
PTIS1005-0N4	0.4 @ 500	0.1/0.2/0.3nH	13 @ 500	0.10	800	14
PTIS1005-0N5	0.5 @ 500	0.1/0.2/0.3nH	13 @ 500	0.15	700	14
PTIS1005-0N8	0.8 @ 500	0.1/0.2/0.3nH	13 @ 500	0.15	700	14
PTIS1005-0N9	0.9 @ 500	0.1/0.2/0.3nH	13 @ 500	0.15	700	14
PTIS1005-1N0	1.0 @ 500	0.1/0.2/0.3nH	13 @ 500	0.15	700	12
PTIS1005-1N1	1.1 @ 500	0.1/0.2/0.3nH	13 @ 500	0.15	700	12
PTIS1005-1N2	1.2 @ 500	0.1/0.2/0.3nH	13 @ 500	0.15	700	12
PTIS1005-1N3	1.3 @ 500	0.1/0.2/0.3nH	13 @ 500	0.25	700	10
PTIS1005-1N4	1.4 @ 500	0.1/0.2/0.3nH	13 @ 500	0.25	700	10
PTIS1005-1N5	1.5 @ 500	0.1/0.2/0.3nH	13 @ 500	0.25	700	10
PTIS1005-1N6	1.6 @ 500	0.1/0.2/0.3nH	13 @ 500	0.25	560	10
PTIS1005-1N7	1.7 @ 500	0.1/0.2/0.3nH	13 @ 500	0.25	560	10
PTIS1005-1N8	1.8 @ 500	0.1/0.2/0.3nH	13 @ 500	0.25	560	10
PTIS1005-1N9	1.9 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	560	8
PTIS1005-2N0	2.0 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	560	8
PTIS1005-2N1	2.1 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	440	8
PTIS1005-2N2	2.2 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	440	8
PTIS1005-2N3	2.3 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	440	8
PTIS1005-2N4	2.4 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	440	8
PTIS1005-2N5	2.5 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	440	8
PTIS1005-2N6	2.6 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	440	8
PTIS1005-2N7	2.7 @ 500	0.1/0.2/0.3nH	13 @ 500	0.35	440	8
PTIS1005-2N8	2.8 @ 500	0.1/0.2/0.3nH	13 @ 500	0.45	380	6
PTIS1005-2N9	2.9 @ 500	0.1/0.2/0.3nH	13 @ 500	0.45	380	6
PTIS1005-3N0	3.0 @ 500	0.1/0.2/0.3nH	13 @ 500	0.45	380	6
PTIS1005-3N1	3.1 @ 500	0.1/0.2/0.3nH	13 @ 500	0.45	380	6
PTIS1005-3N2	3.2 @ 500	0.1/0.2/0.3nH	13 @ 500	0.45	380	6
PTIS1005-3N3	3.3 @ 500	0.1/0.2/0.3nH	13 @ 500	0.45	380	6
PTIS1005-3N4	3.4 @ 500	0.1/0.2/0.3nH	13 @ 500	0.55	380	6
PTIS1005-3N5	3.5 @ 500	0.1/0.2/0.3nH	13 @ 500	0.55	380	6
PTIS1005-3N6	3.6 @ 500	0.1/0.2/0.3nH	13 @ 500	0.55	380	6
PTIS1005-3N7	3.7 @ 500	0.1/0.2/0.3nH	13 @ 500	0.55	340	6
PTIS1005-3N8	3.8 @ 500	0.1/0.2/0.3nH	13 @ 500	0.55	340	6
PTIS1005-3N9	3.9 @ 500	0.1/0.2/0.3nH	13 @ 500	0.55	340	6
PTIS1005-4N3	4.3 @ 500	0.1/0.2/0.3nH	13 @ 500	0.65	320	6
PTIS1005-4N7	4.7 @ 500	0.1/0.2/0.3nH	13 @ 500	0.65	320	6
PTIS1005-5N4	5.4 @ 500	0.1/0.2/0.3nH	13 @ 500	0.85	280	6
PTIS1005-5N6	5.6 @ 500	0.1/0.2/0.3nH	13 @ 500	0.85	280	6
PTIS1005-5N9	5.9 @ 500	0.1/0.2/0.3nH	13 @ 500	0.85	280	6
PTIS1005-6N5	6.5 @ 500	0.1/0.2/0.3nH	13 @ 500	1.05	260	6
PTIS1005-6N8	6.8 @ 500	0.1/0.2/0.3nH	13 @ 500	1.05	260	6
PTIS1005-7N2	7.2 @ 500	0.1/0.2/0.3nH	13 @ 500	1.05	260	6
PTIS1005-8N0	8.0 @ 500	0.1/0.2/0.3nH	13 @ 500	1.25	220	5.5
PTIS1005-8N1	8.1 @ 500	0.1/0.2/0.3nH	13 @ 500	1.25	220	5.5
PTIS1005-8N2	8.2 @ 500	0.1/0.2/0.3nH	13 @ 500	1.25	220	5.5
PTIS1005-9N1	9.1 @ 500	0.1/0.2/0.3nH	13 @ 500	1.25	220	5.5
PTIS1005-10N	10.0 @ 500	1/2/3/5%	13 @ 500	1.35	200	4.5
PTIS1005-10N8	10.8 @ 500	1/2/3/5%	13 @ 500	1.35	200	4.5
PTIS1005-12N	12.0 @ 500	1/2/3/5%	13 @ 500	1.55	180	3.7
PTIS1005-13N8	13.8 @ 500	1/2/3/5%	13 @ 500	1.75	180	3.7
PTIS1005-15N	15.0 @ 500	1/2/3/5%	13 @ 500	1.75	130	3.3
PTIS1005-17N	17.0 @ 500	1/2/3/5%	13 @ 500	1.95	100	3.1
PTIS1005-18N	18.0 @ 500	1/2/3/5%	13 @ 500	2.15	100	3.1
PTIS1005-20N8	20.8 @ 500	1/2/3/5%	13 @ 500	2.55	90	2.8
PTIS1005-22N	22.0 @ 500	1/2/3/5%	13 @ 500	2.65	90	2.8
PTIS1005-27N	27.0 @ 500	1/2/3/5%	13 @ 500	3.25	75	2.5
PTIS1005-33N	33.0 @ 500	5%	13 @ 500	4.50	75	2.5

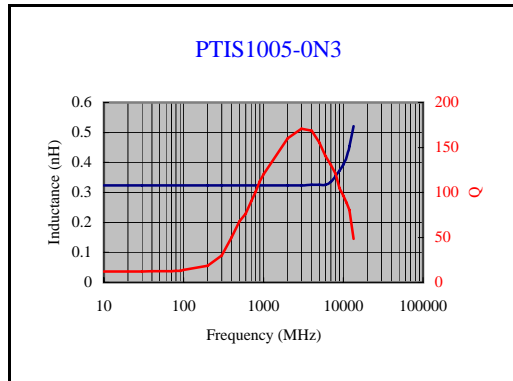
PTIS1005 Series (Size: 0402 (1005))

Rating Curves

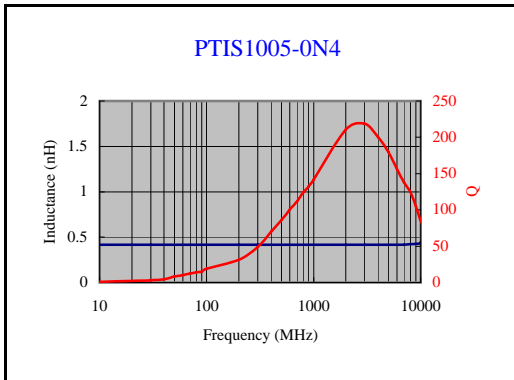
0.2nH



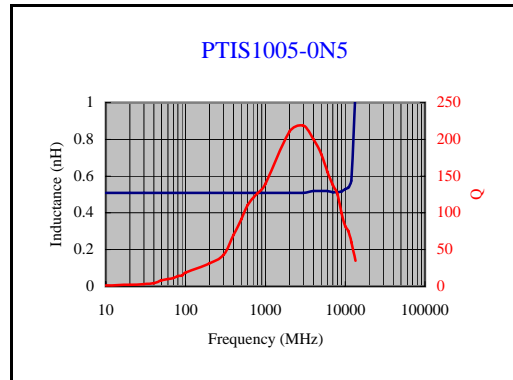
0.3nH



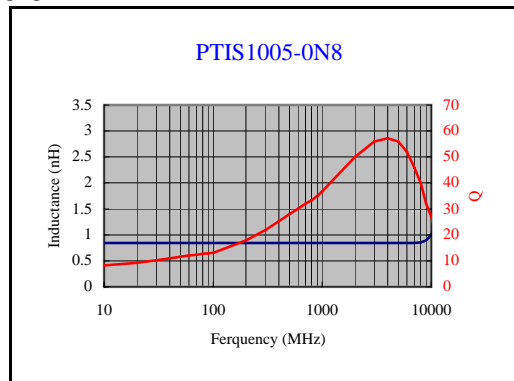
0.4nH



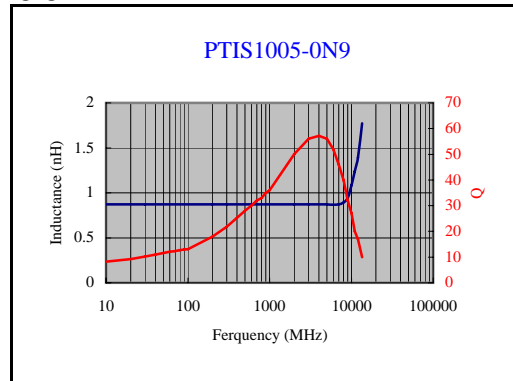
0.5nH



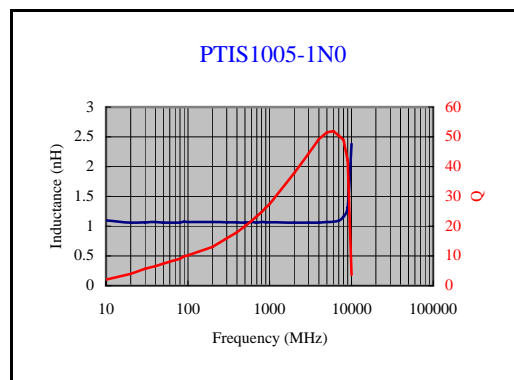
0.8nH



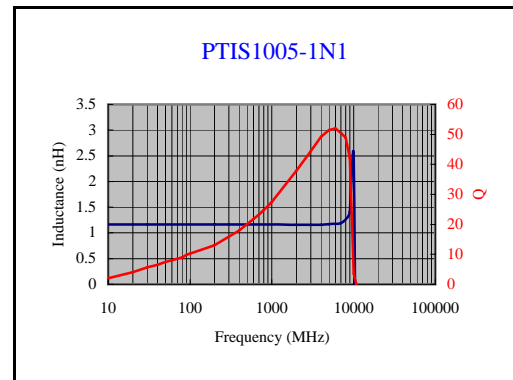
0.9nH



1.0nH



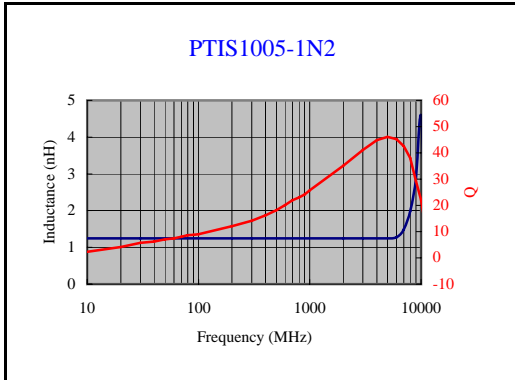
1.1nH



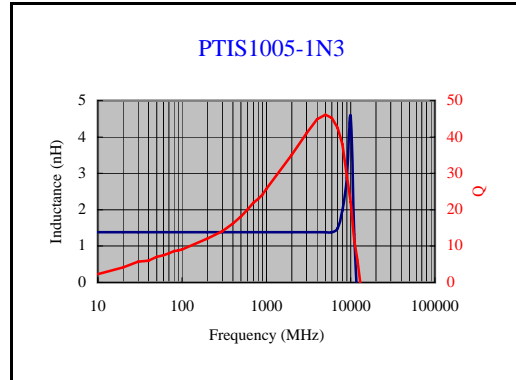
PTIS1005 Series (Size: 0402 (1005))

Rating Curves (Cont'd)

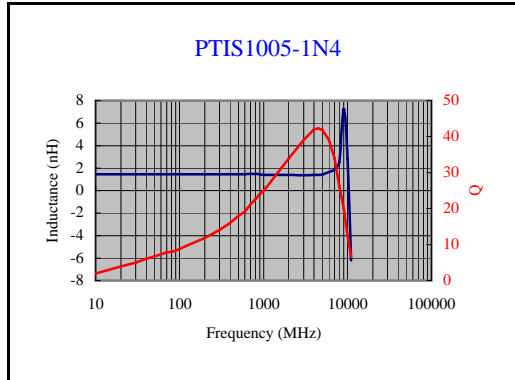
1.2nH



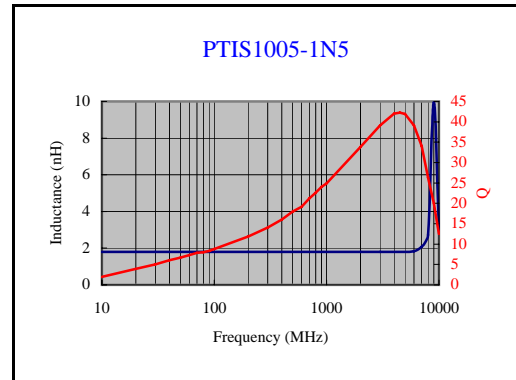
1.3nH



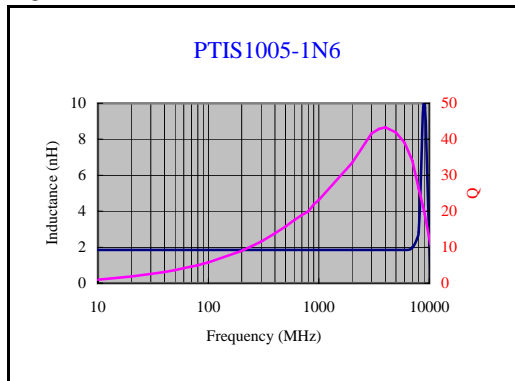
1.4nH



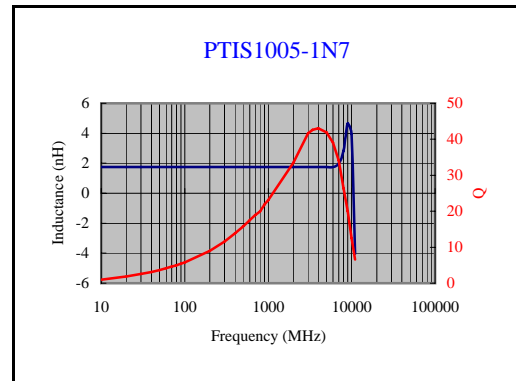
1.5nH



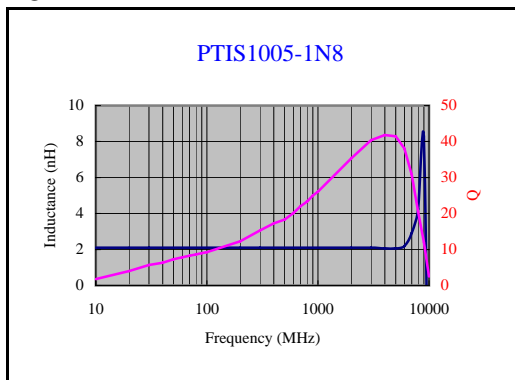
1.6nH



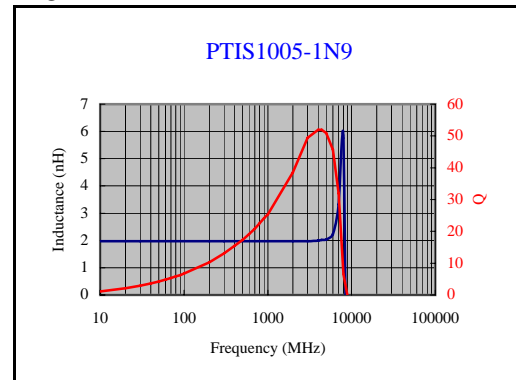
1.7nH



1.8nH



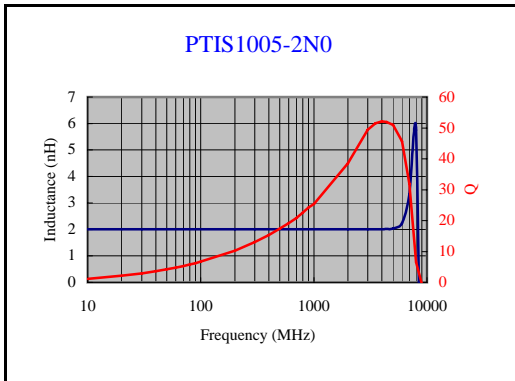
1.9nH



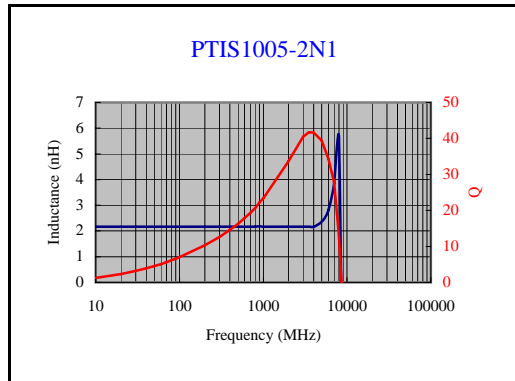
PTIS1005 Series (Size: 0402 (1005))

Rating Curves (Cont'd)

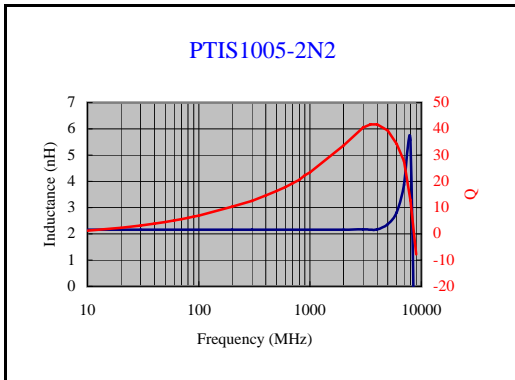
2.0nH



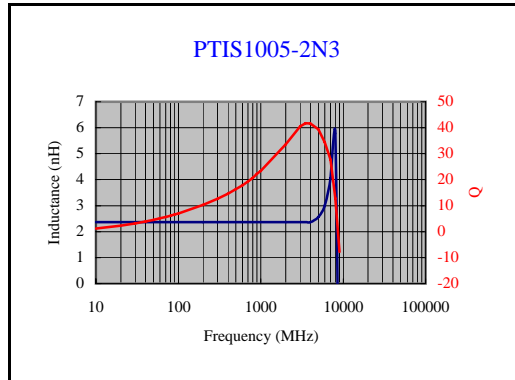
2.1nH



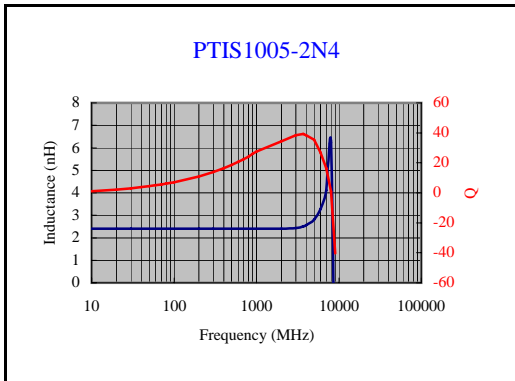
2.2nH



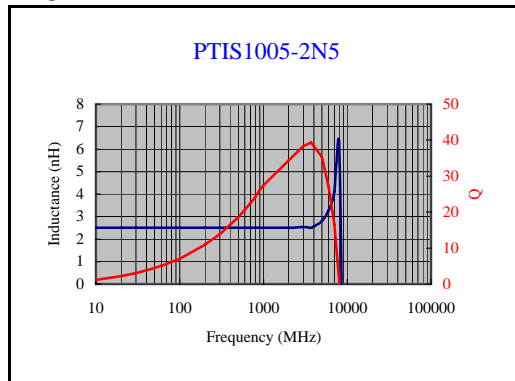
2.3nH



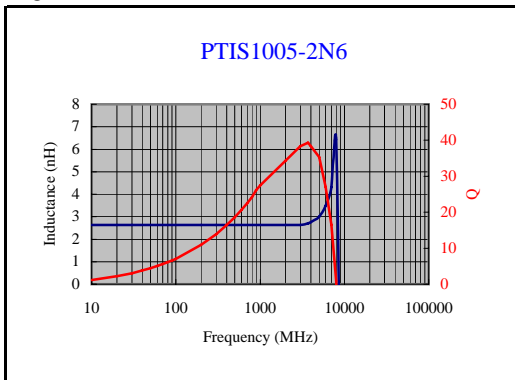
2.4nH



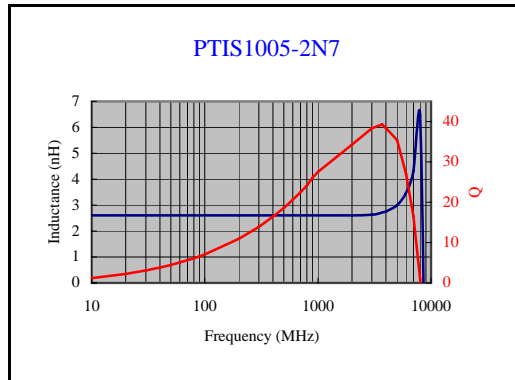
2.5nH



2.6nH



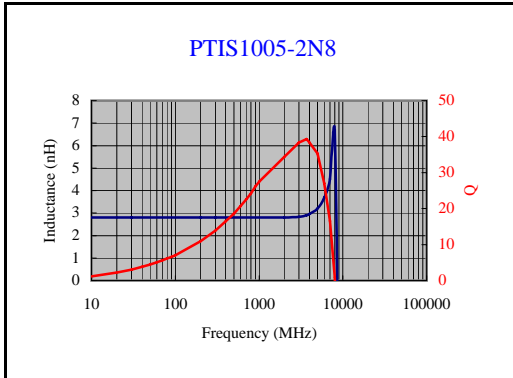
2.7nH



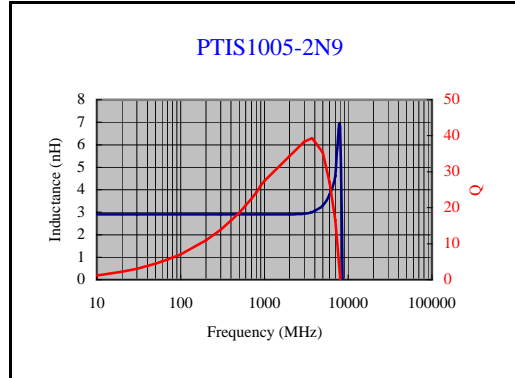
PTIS1005 Series (Size: 0402 (1005))

Rating Curves (Cont'd)

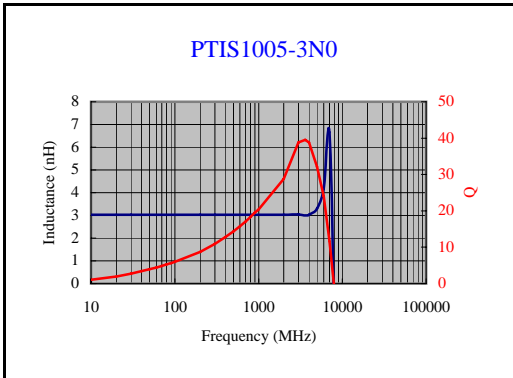
2.8nH



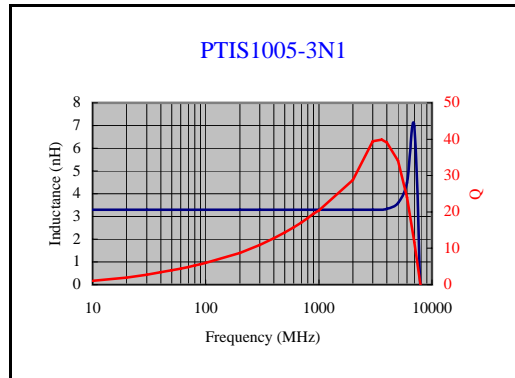
2.9nH



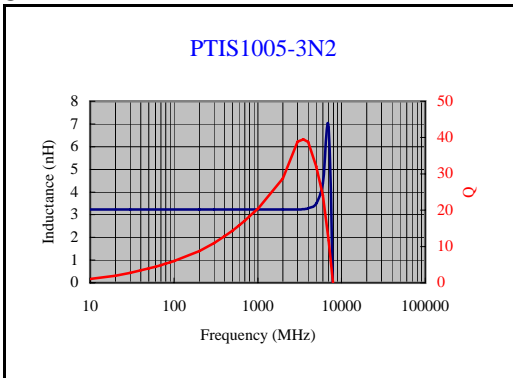
3.0nH



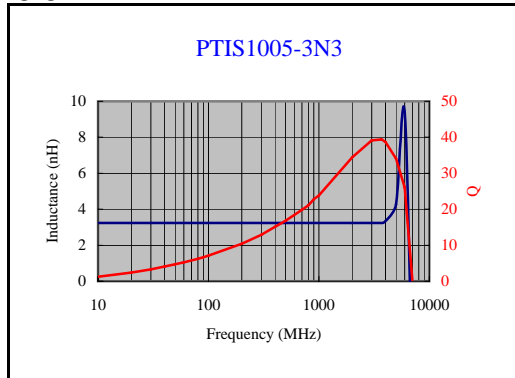
3.1nH



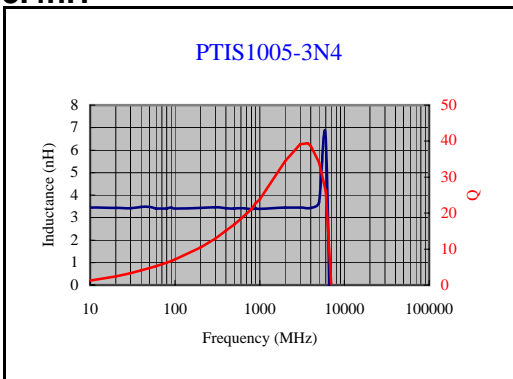
3.2nH



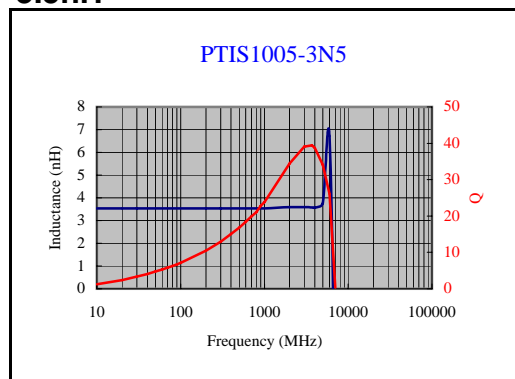
3.3nH



3.4nH



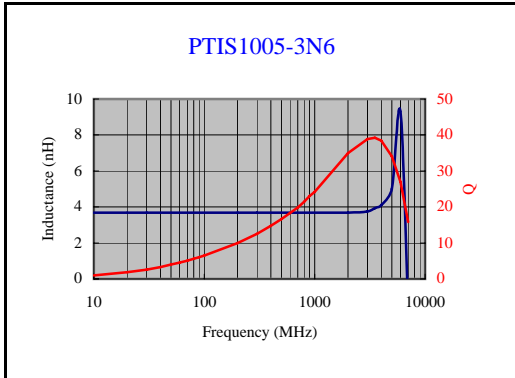
3.5nH



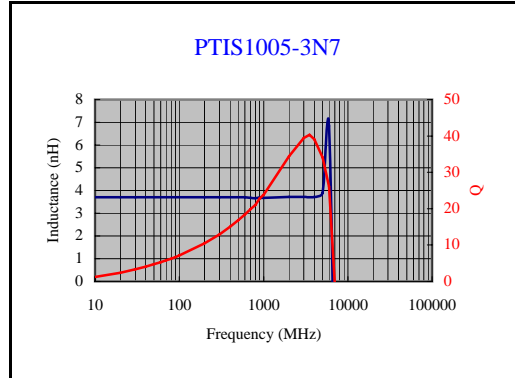
PTIS1005 Series (Size: 0402 (1005))

Rating Curves (Cont'd)

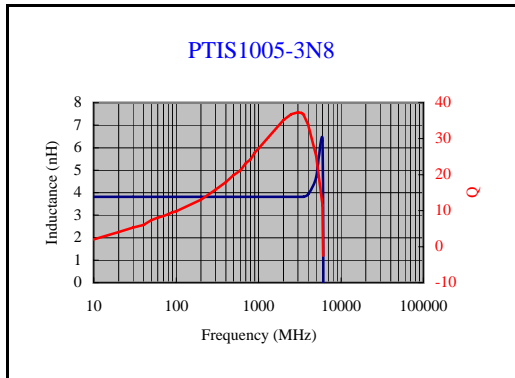
3.6nH



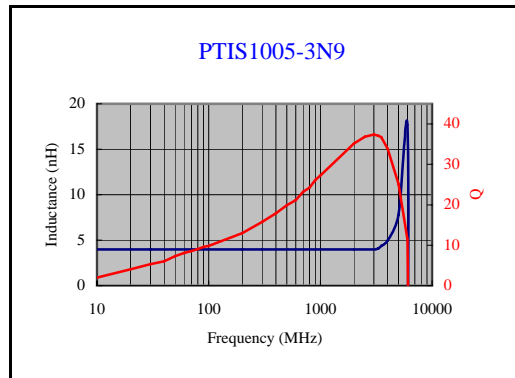
3.7nH



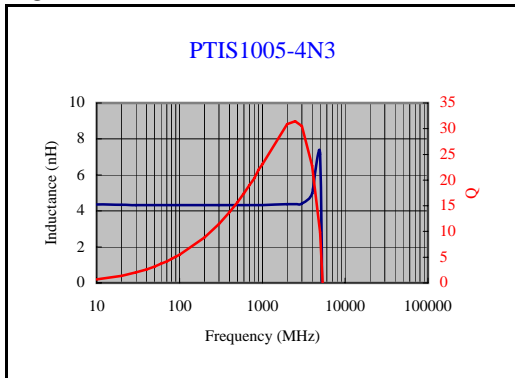
3.8nH



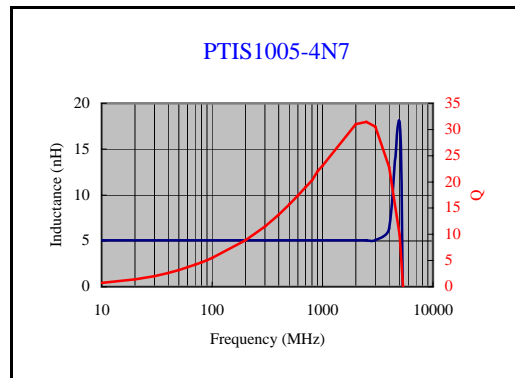
3.9nH



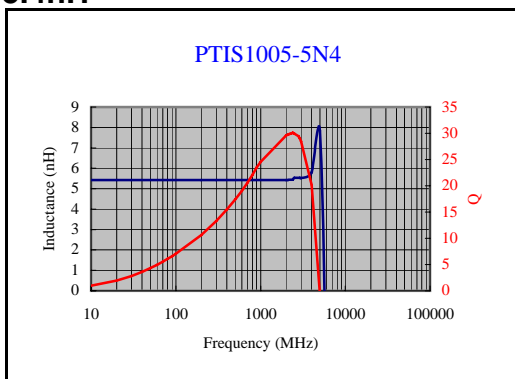
4.3nH



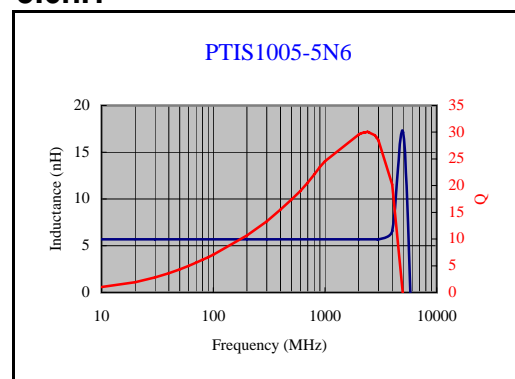
4.7nH



5.4nH



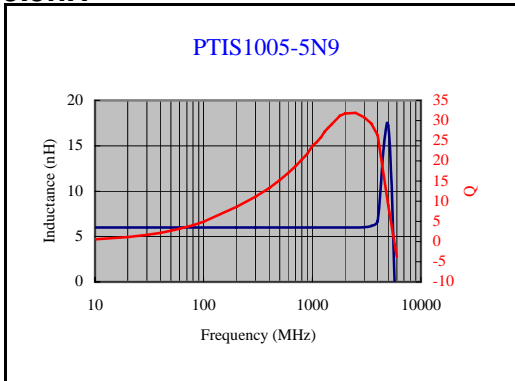
5.6nH



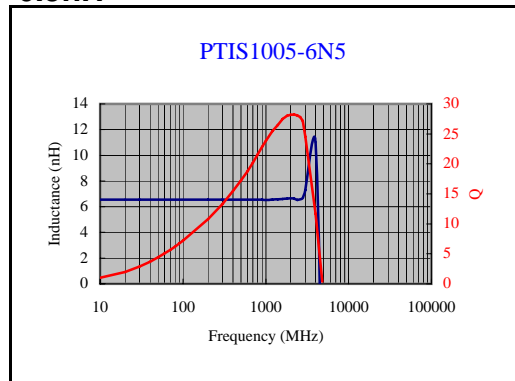
PTIS1005 Series (Size: 0402 (1005))

Rating Curves (Cont'd)

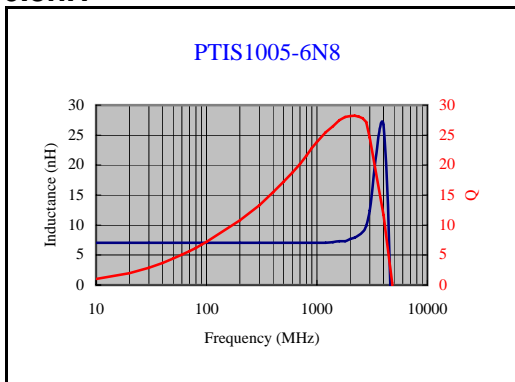
5.9nH



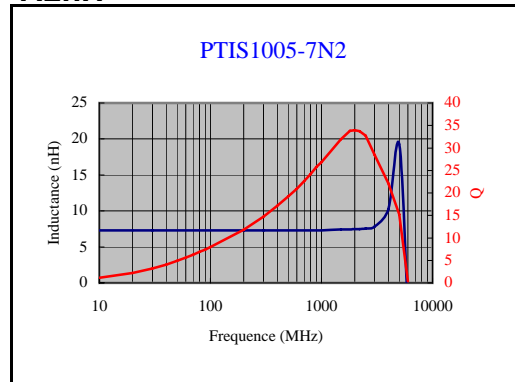
6.5nH



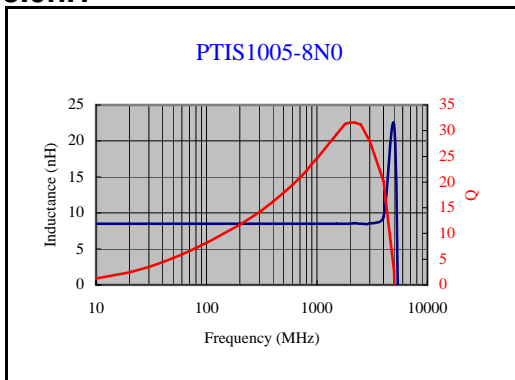
6.8nH



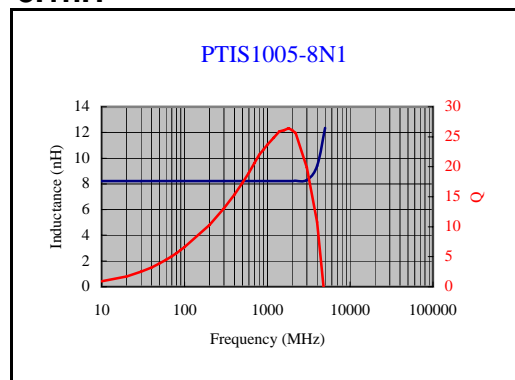
7.2nH



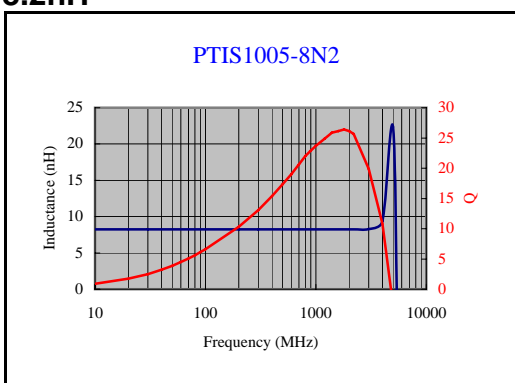
8.0nH



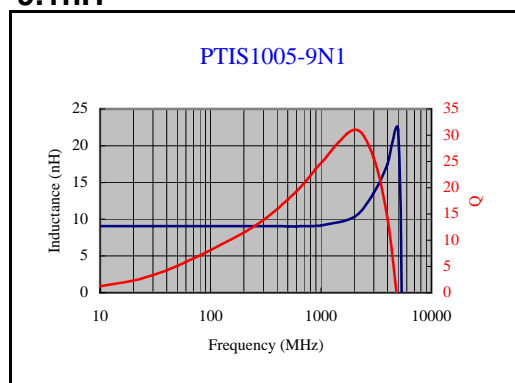
8.1nH



8.2nH



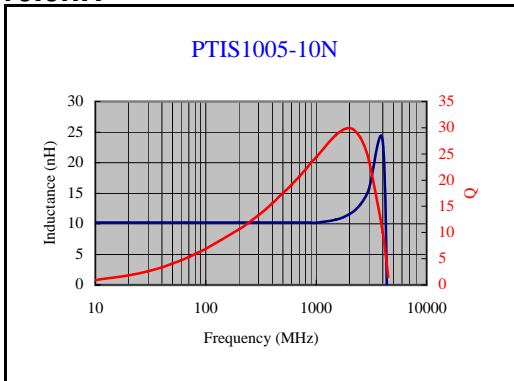
9.1nH



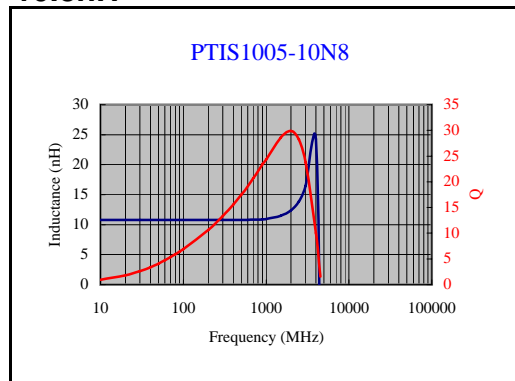
PTIS1005 Series (Size: 0402 (1005))

Rating Curves (Cont'd)

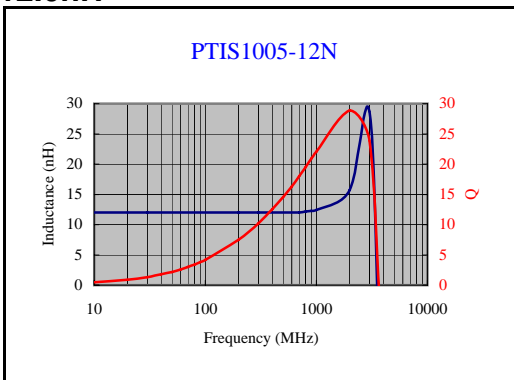
10.0nH



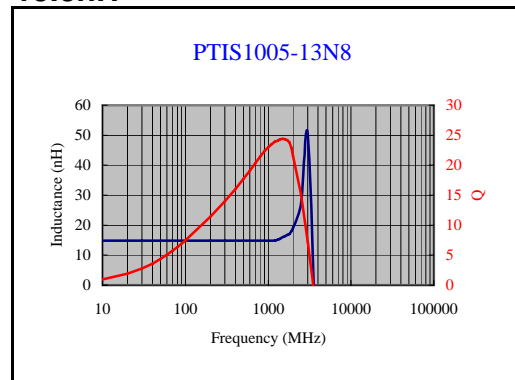
10.8nH



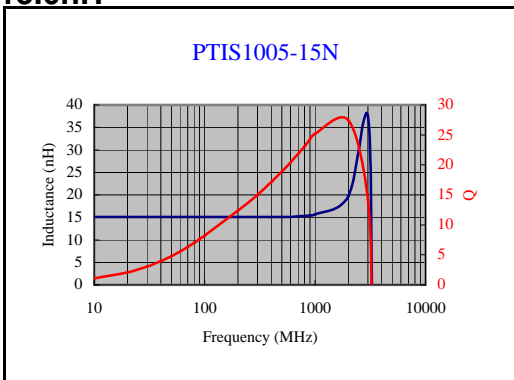
12.0nH



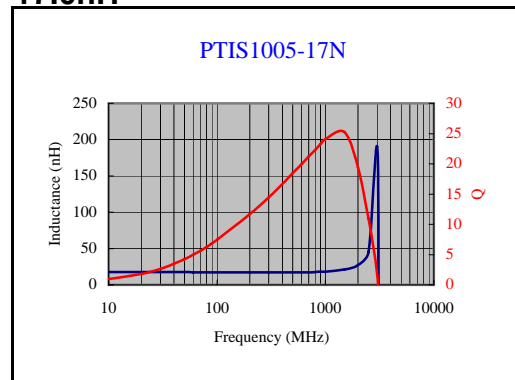
13.8nH



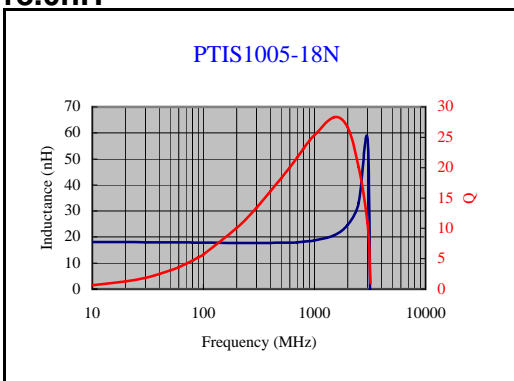
15.0nH



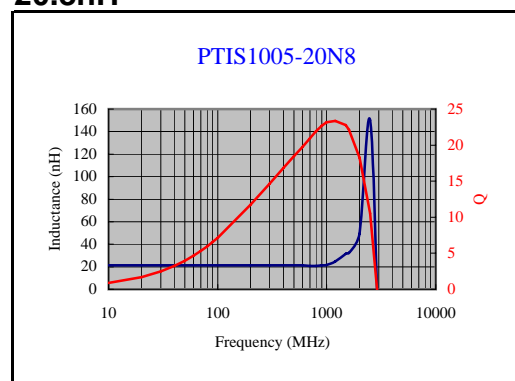
17.0nH



18.0nH



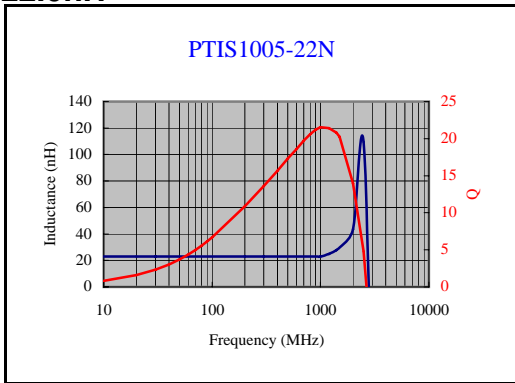
20.8nH



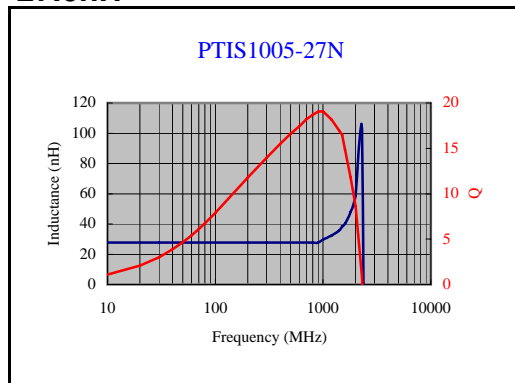
PTIS1005 Series (Size: 0402 (1005))

Rating Curves (Cont'd)

22.0nH



27.0nH



33.0nH

