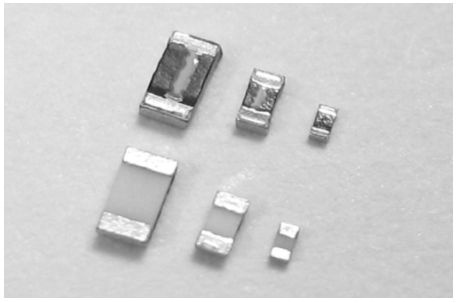
PTIS Series

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

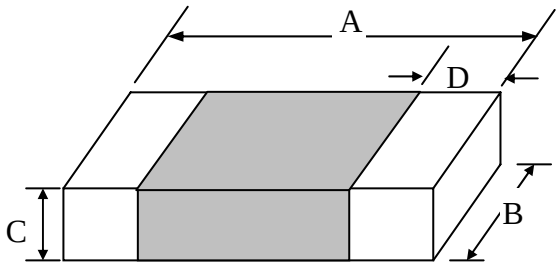
> VCO, TCXO Circuit and RF Transceiver Module.
> Wireless LAN, Bluetooth Module, Communication Appliances.
> Cellular Telephone, Pagers and GPS Products.

Features

> Photo lithographic single layer ceramic chip.
> High SRF, excellent Q, superior temperature stability.
> Tight tolerance of ±1% or ±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:



Unit: mm

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

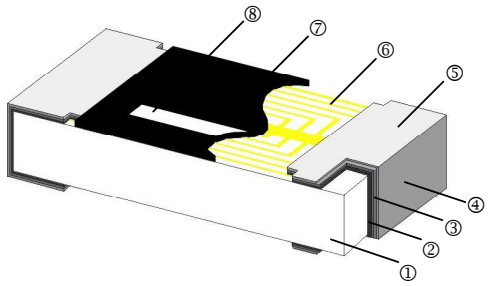
PTIS Series

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 0603-3N3 B

INDUCTANCE TOLERANCE
(B: ±0.10nH, C: ±0.20nH, S: ±0.30nH, F: ±1%, G: ±2%, H: ±3%, J: ±5%)
INDUCTANCE VALUE CODE
(i.e. 3N3: 3.3nH, 10N: 10nH)
SIZE CODE
(0201(0603), 0402(1005))
PRODUCT SERIES CODE

PTIS0603 Series (Size: 0201 (0603))

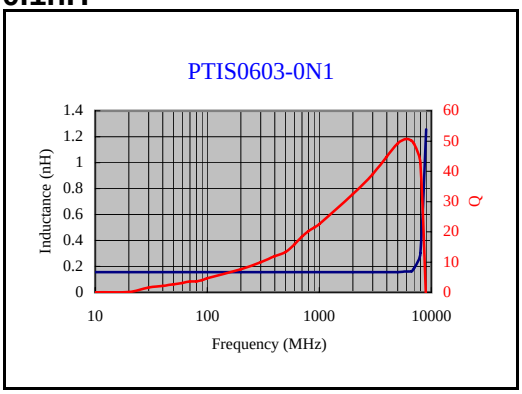
Electrical Characteristics

Part No.	L (nH) @ _MHz	Inductance Tolerance (±% or ±nH)	Q (Min.) @ _MHz	DCR Ω (Max.)	Rated Current (mA) (Max.)	SRF (Min.) (GHz)
PTIS0603-0N1	0.1 @ 500	0.1/0.2/0.3nH	8 @ 500	0.20	400	9
PTIS0603-0N2	0.2 @ 500	0.1/0.2/0.3nH	8 @ 500	0.20	400	9
PTIS0603-0N3	0.3 @ 500	0.1/0.2/0.3nH	8 @ 500	0.20	400	9
PTIS0603-0N4	0.4 @ 500	0.1/0.2/0.3nH	8 @ 500	0.25	350	9
PTIS0603-0N5	0.5 @ 500	0.1/0.2/0.3nH	8 @ 500	0.25	350	9
PTIS0603-0N6	0.6 @ 500	0.1/0.2/0.3nH	8 @ 500	0.25	350	9
PTIS0603-0N7	0.7 @ 500	0.1/0.2/0.3nH	8 @ 500	0.30	300	9
PTIS0603-0N8	0.8 @ 500	0.1/0.2/0.3nH	8 @ 500	0.30	300	9
PTIS0603-0N9	0.9 @ 500	0.1/0.2/0.3nH	8 @ 500	0.30	300	9
PTIS0603-1N0	1.0 @ 500	0.1/0.2/0.3nH	8 @ 500	0.30	300	9
PTIS0603-1N1	1.1 @ 500	0.1/0.2/0.3nH	8 @ 500	0.35	300	9
PTIS0603-1N2	1.2 @ 500	0.1/0.2/0.3nH	8 @ 500	0.35	300	9
PTIS0603-1N3	1.3 @ 500	0.1/0.2/0.3nH	8 @ 500	0.45	250	9
PTIS0603-1N4	1.4 @ 500	0.1/0.2/0.3nH	8 @ 500	0.45	250	9
PTIS0603-1N5	1.5 @ 500	0.1/0.2/0.3nH	8 @ 500	0.45	250	9
PTIS0603-1N6	1.6 @ 500	0.1/0.2/0.3nH	8 @ 500	0.55	200	9
PTIS0603-1N7	1.7 @ 500	0.1/0.2/0.3nH	8 @ 500	0.55	200	9
PTIS0603-1N8	1.8 @ 500	0.1/0.2/0.3nH	8 @ 500	0.55	200	9
PTIS0603-1N9	1.9 @ 500	0.1/0.2/0.3nH	8 @ 500	0.55	200	9
PTIS0603-2N0	2.0 @ 500	0.1/0.2/0.3nH	8 @ 500	0.70	200	8
PTIS0603-2N1	2.1 @ 500	0.1/0.2/0.3nH	8 @ 500	0.70	200	8
PTIS0603-2N2	2.2 @ 500	0.1/0.2/0.3nH	8 @ 500	0.70	200	8
PTIS0603-2N3	2.3 @ 500	0.1/0.2/0.3nH	8 @ 500	0.80	150	8
PTIS0603-2N4	2.4 @ 500	0.1/0.2/0.3nH	8 @ 500	0.80	150	8
PTIS0603-2N5	2.5 @ 500	0.1/0.2/0.3nH	8 @ 500	0.80	150	8
PTIS0603-2N6	2.6 @ 500	0.1/0.2/0.3nH	8 @ 500	0.80	150	8
PTIS0603-2N7	2.7 @ 500	0.1/0.2/0.3nH	8 @ 500	0.80	150	8
PTIS0603-2N8	2.8 @ 500	0.1/0.2/0.3nH	8 @ 500	1.00	150	6
PTIS0603-2N9	2.9 @ 500	0.1/0.2/0.3nH	8 @ 500	1.00	150	6
PTIS0603-3N0	3.0 @ 500	0.1/0.2/0.3nH	8 @ 500	1.00	150	6
PTIS0603-3N1	3.1 @ 500	0.1/0.2/0.3nH	8 @ 500	1.00	150	6
PTIS0603-3N2	3.2 @ 500	0.1/0.2/0.3nH	8 @ 500	1.00	150	6
PTIS0603-3N3	3.3 @ 500	0.1/0.2/0.3nH	8 @ 500	1.00	150	6
PTIS0603-3N4	3.4 @ 500	0.1/0.2/0.3nH	8 @ 500	1.20	150	6
PTIS0603-3N5	3.5 @ 500	0.1/0.2/0.3nH	8 @ 500	1.20	150	6
PTIS0603-3N6	3.6 @ 500	0.1/0.2/0.3nH	8 @ 500	1.20	150	6
PTIS0603-3N7	3.7 @ 500	0.1/0.2/0.3nH	8 @ 500	1.20	150	6
PTIS0603-3N8	3.8 @ 500	0.1/0.2/0.3nH	8 @ 500	1.20	150	6
PTIS0603-3N9	3.9 @ 500	0.1/0.2/0.3nH	8 @ 500	1.20	150	6
PTIS0603-4N0	4.0 @ 500	0.1/0.2/0.3nH	8 @ 500	1.20	150	6
PTIS0603-4N4	4.4 @ 500	0.1/0.2/0.3nH	8 @ 500	1.30	140	6
PTIS0603-4N7	4.7 @ 500	0.1/0.2/0.3nH	8 @ 500	1.40	130	6
PTIS0603-4N9	4.9 @ 500	0.1/0.2/0.3nH	8 @ 500	1.60	130	6
PTIS0603-5N6	5.6 @ 500	2/5%	8 @ 500	1.80	130	4
PTIS0603-6N1	6.1 @ 500	2/5%	8 @ 500	2.00	120	4
PTIS0603-6N8	6.8 @ 500	2/5%	8 @ 500	2.30	110	4
PTIS0603-7N4	7.4 @ 500	2/5%	8 @ 500	2.80	110	4
PTIS0603-8N2	8.2 @ 500	2/5%	8 @ 500	3.00	110	3
PTIS0603-9N1	9.1 @ 500	2/5%	8 @ 500	3.25	100	3
PTIS0603-9N2	9.2 @ 500	2/5%	8 @ 500	3.25	100	3
PTIS0603-10N	10.0 @ 500	2/5%	8 @ 500	3.50	80	2

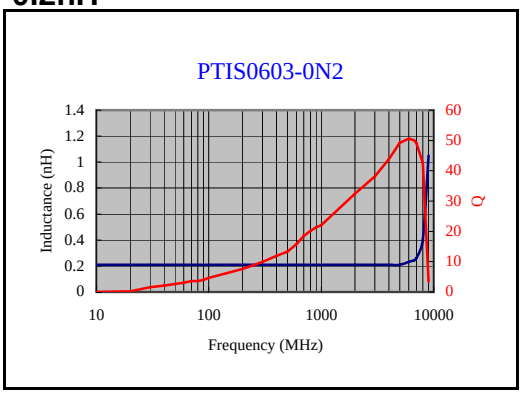
PTIS0603 Series (Size: 0201 (0603))

Rating Curves

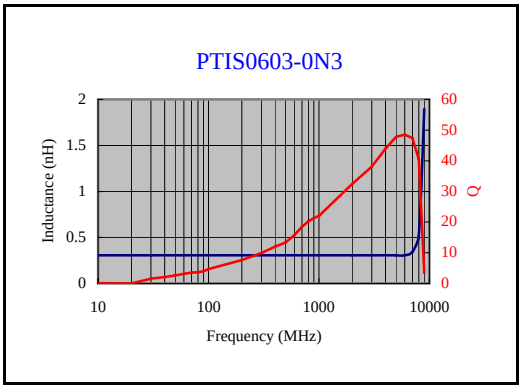
0.1nH



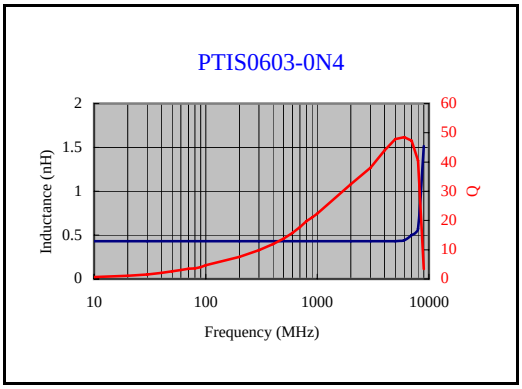
0.2nH



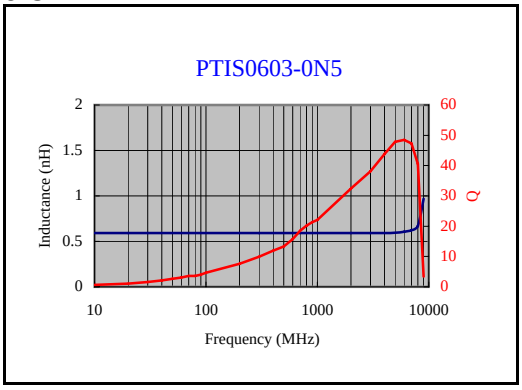
0.3nH



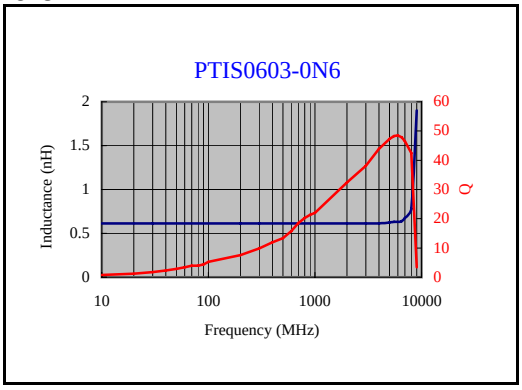
0.4nH



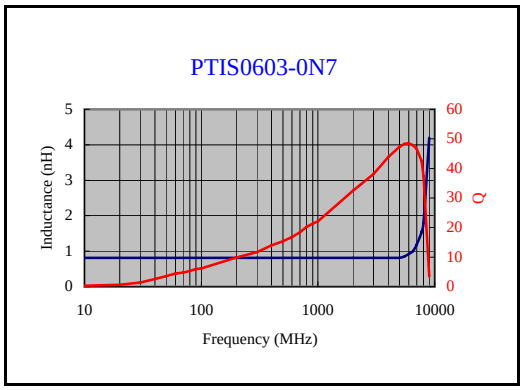
0.5nH



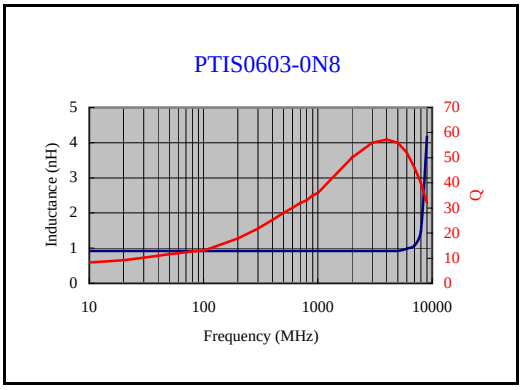
0.6nH



0.7nH



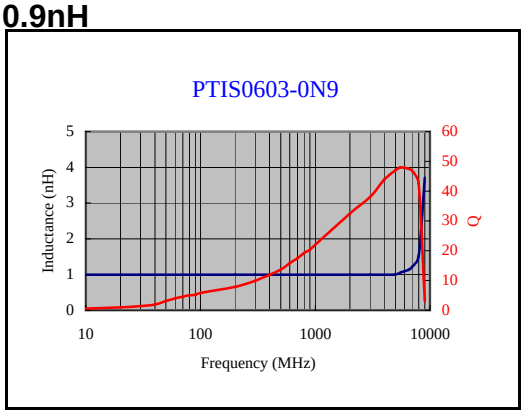
0.8nH



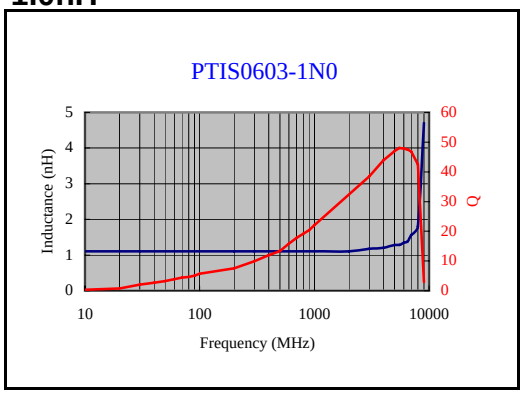
PTIS0603 Series (Size: 0201 (0603))

Rating Curves (Cont'd)

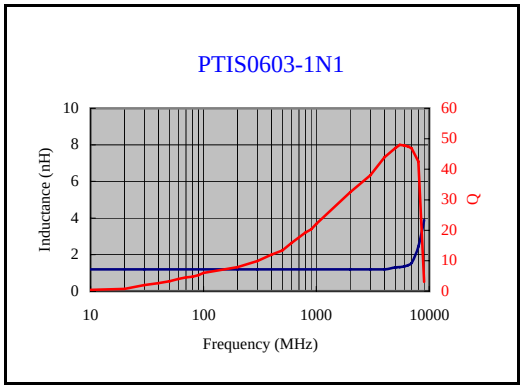
0.9nH



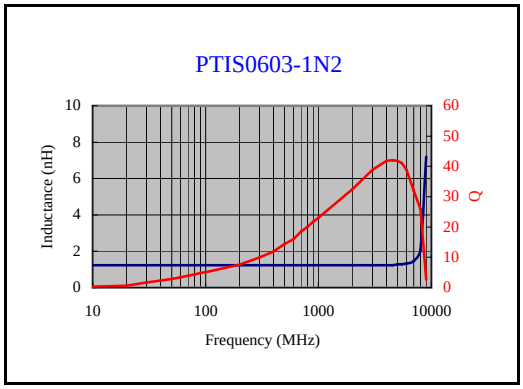
1.0nH



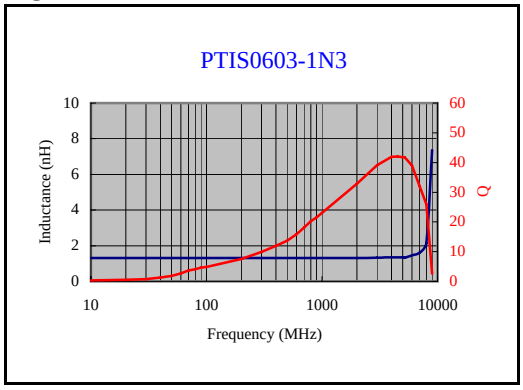
1.1nH



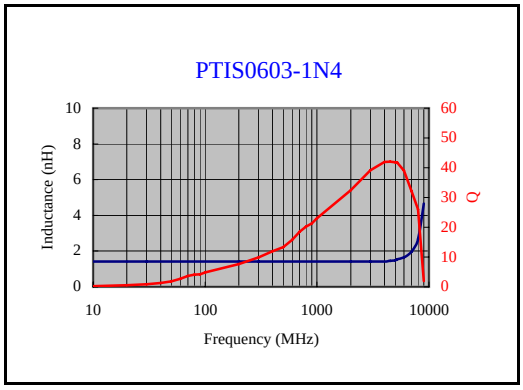
1.2nH



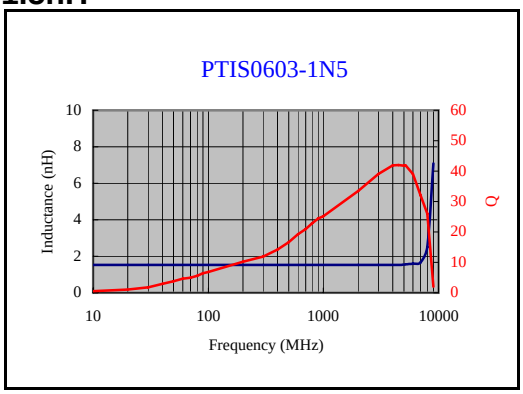
1.3nH



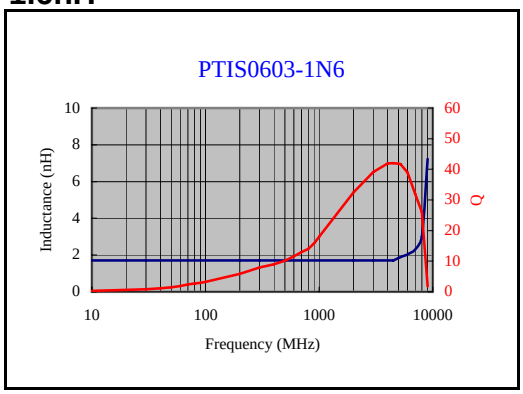
1.4nH



1.5nH



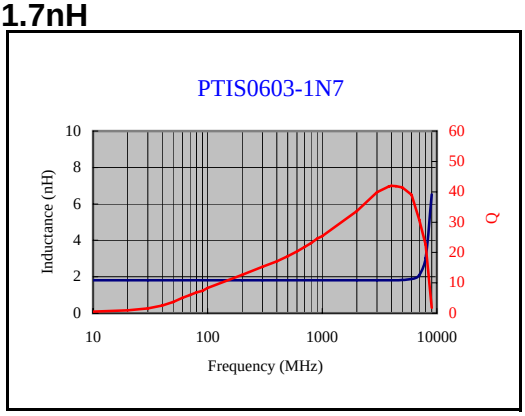
1.6nH



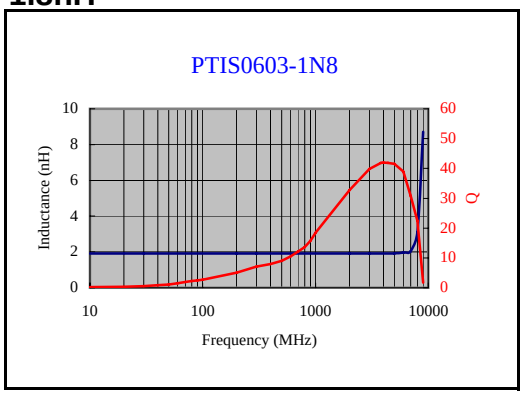
PTIS0603 Series (Size: 0201 (0603))

Rating Curves (Cont'd)

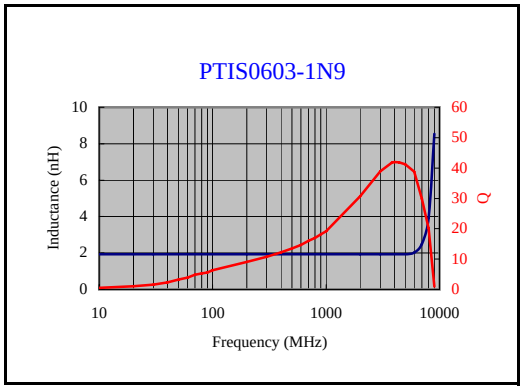
1.7nH



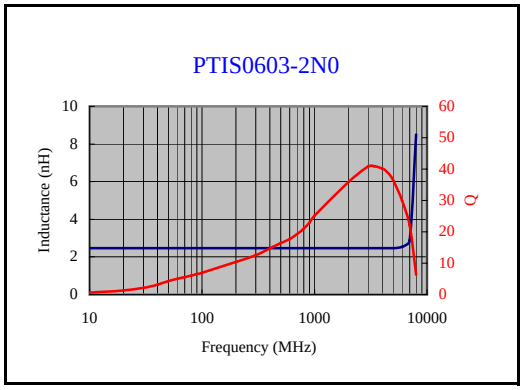
1.8nH



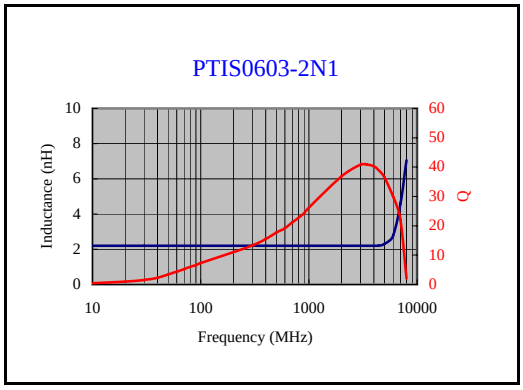
1.9nH



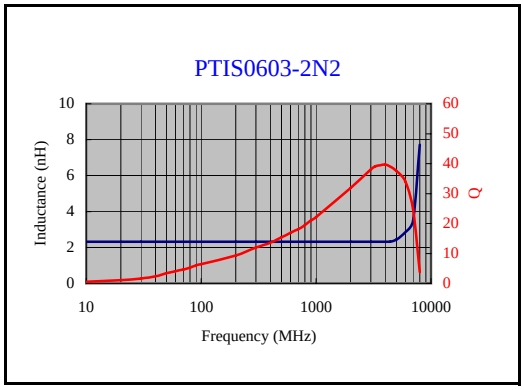
2.0nH



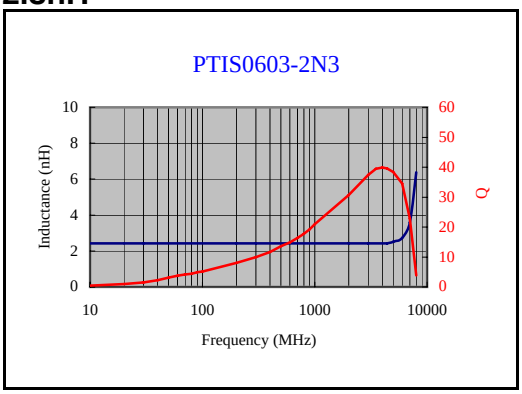
2.1nH



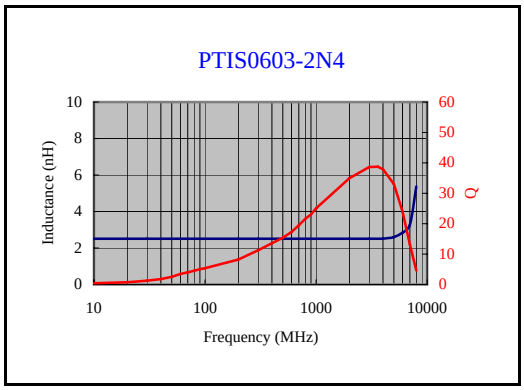
2.2nH



2.3nH



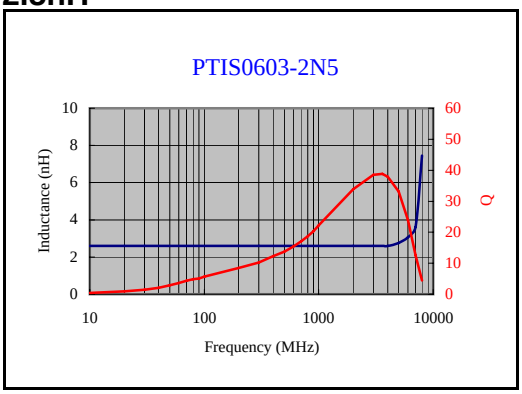
2.4nH



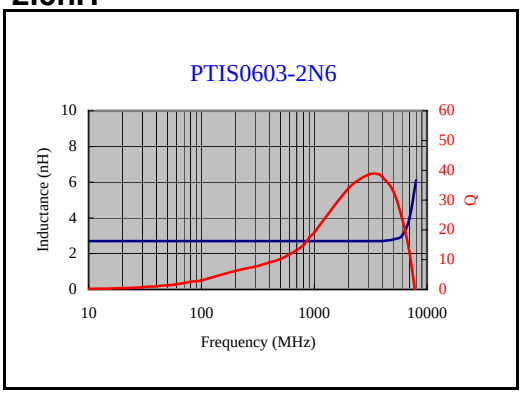
PTIS0603 Series (Size: 0201 (0603))

Rating Curves (Cont'd)

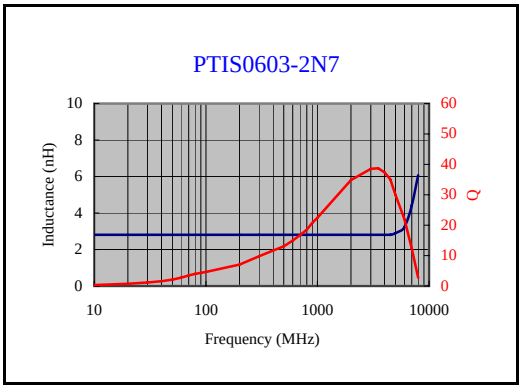
2.5nH



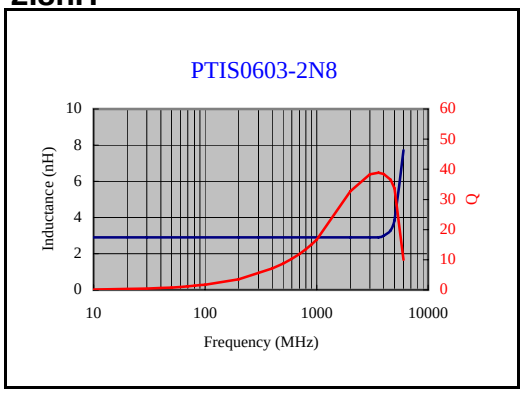
2.6nH



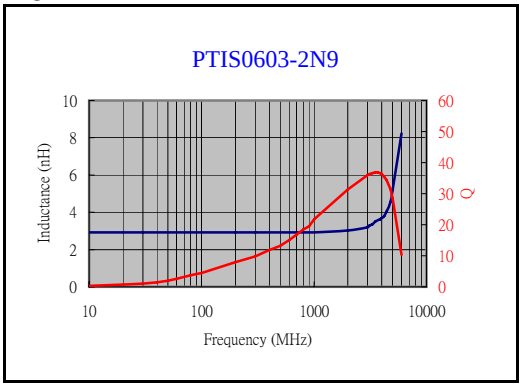
2.7nH



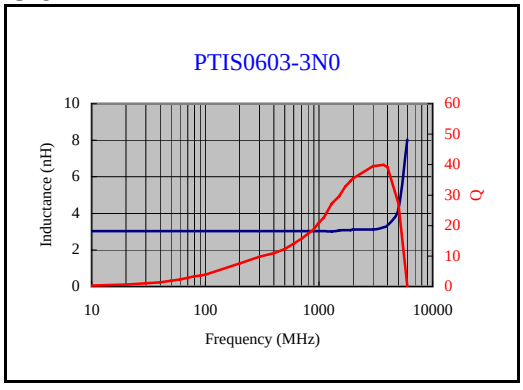
2.8nH



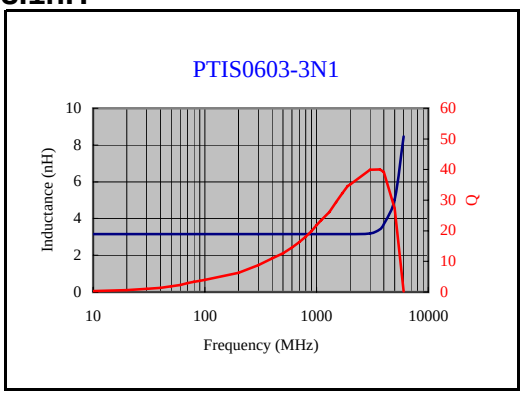
2.9nH



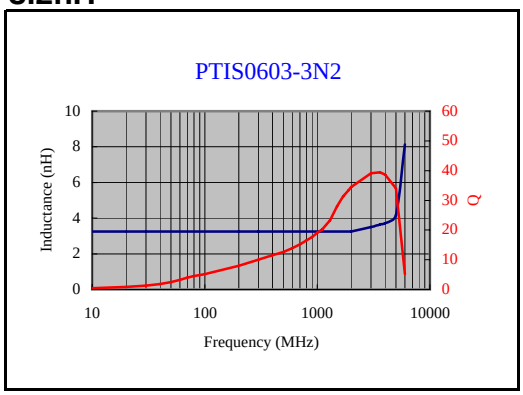
3.0nH



3.1nH



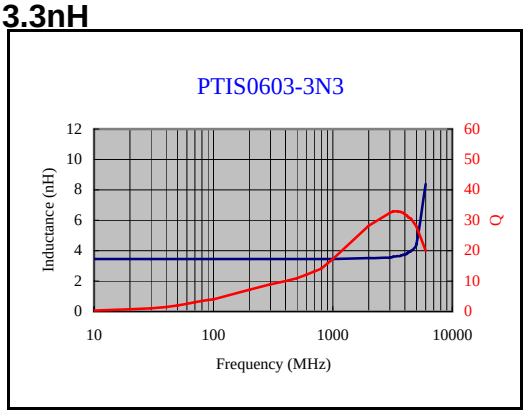
3.2nH



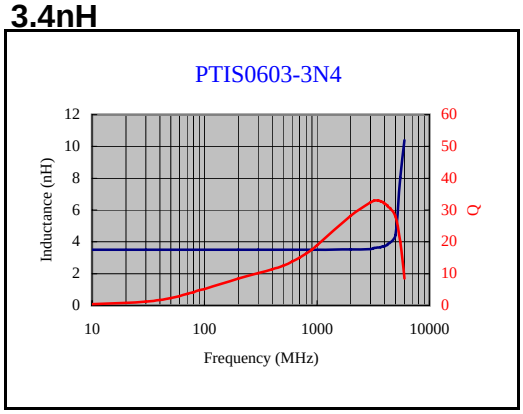
PTIS0603 Series (Size: 0201 (0603))

Rating Curves (Cont'd)

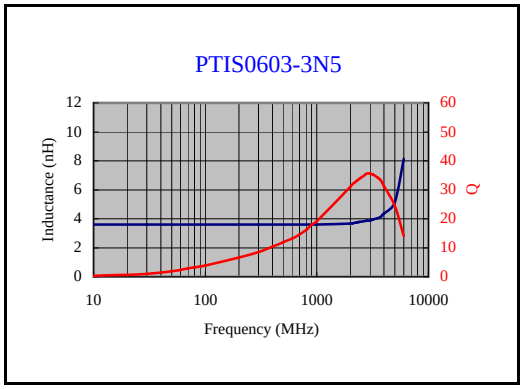
3.3nH



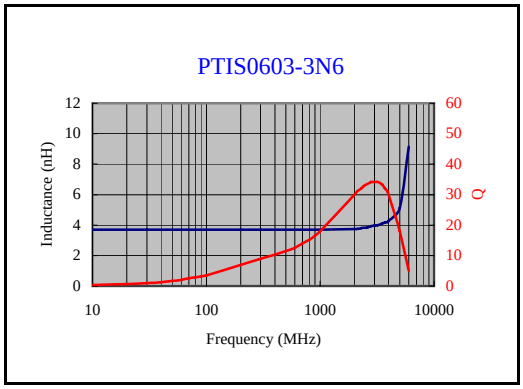
3.4nH



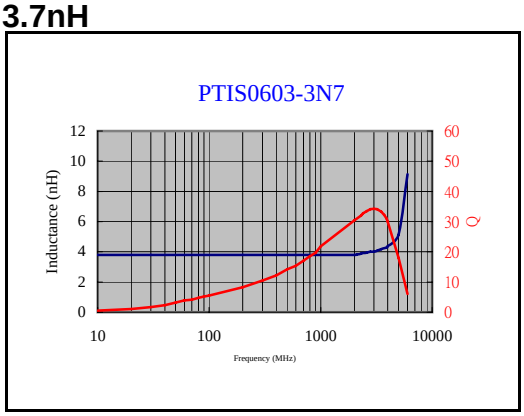
3.5nH



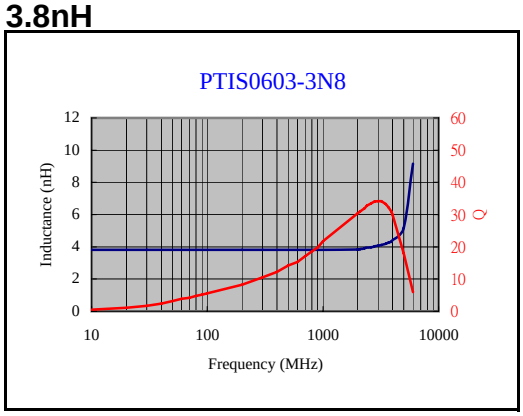
3.6nH



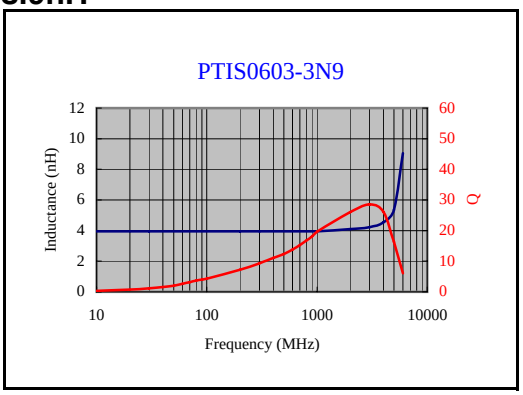
3.7nH



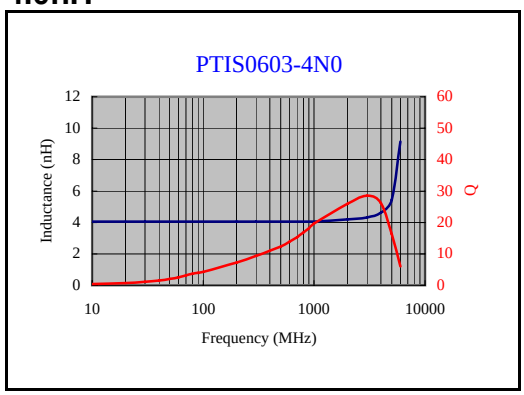
3.8nH



3.9nH



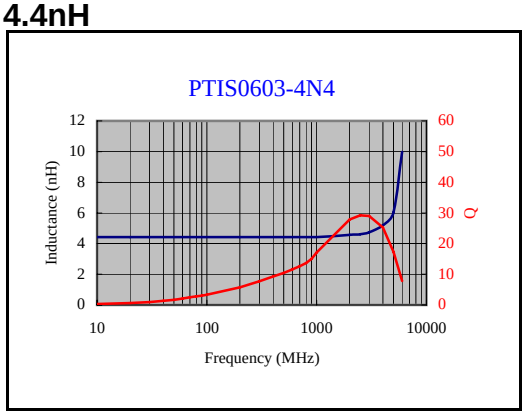
4.0nH



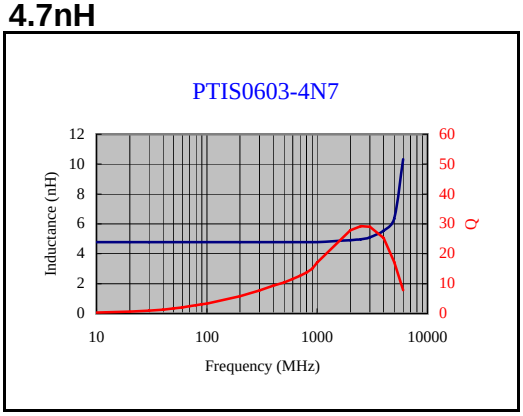
PTIS0603 Series (Size: 0201 (0603))

Rating Curves (Cont'd)

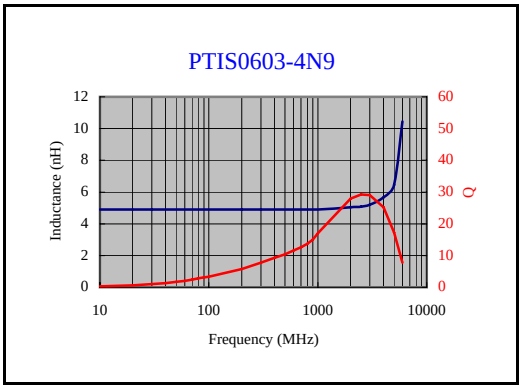
4.4nH



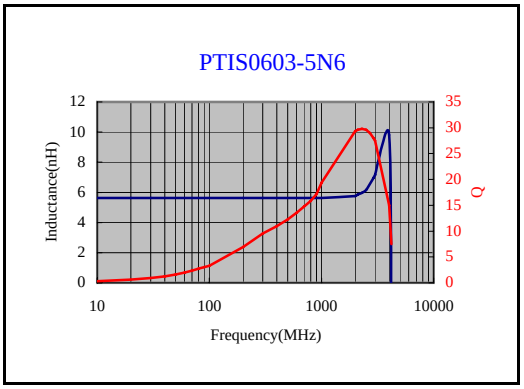
4.7nH



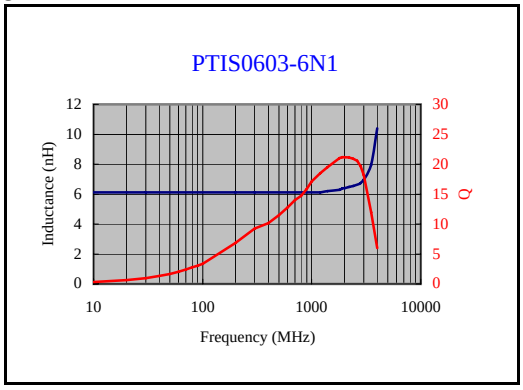
4.9nH



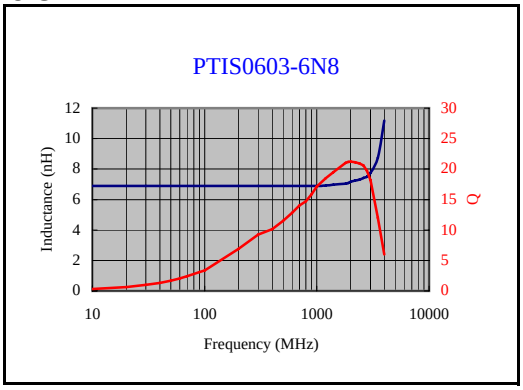
5.6nH



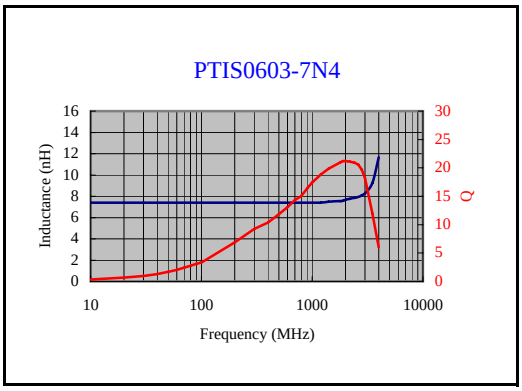
6.1nH



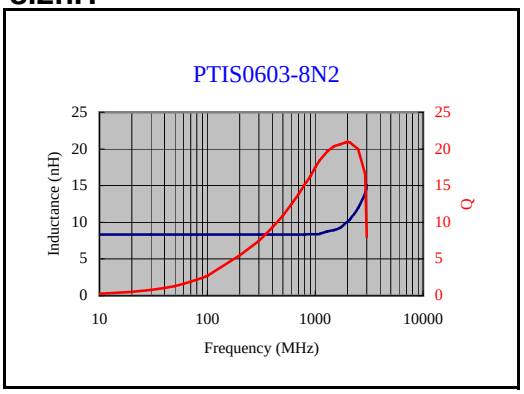
6.8nH



7.4nH



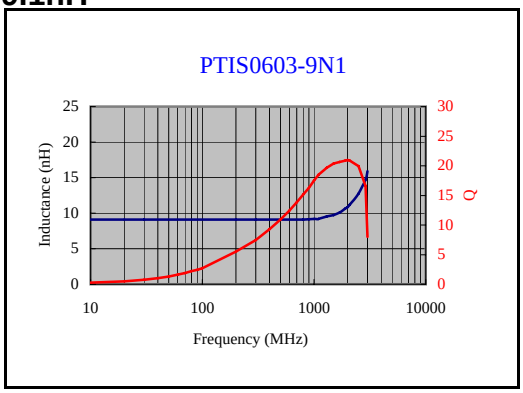
8.2nH



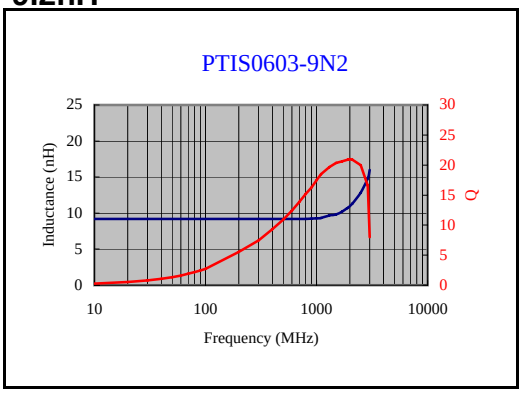
PTIS0603 Series (Size: 0201 (0603))

Rating Curves (Cont'd)

9.1nH



9.2nH



10.0nH