Multilayer Chip Inductor

AMAX ELECTRONICS COMPANY

POE Series

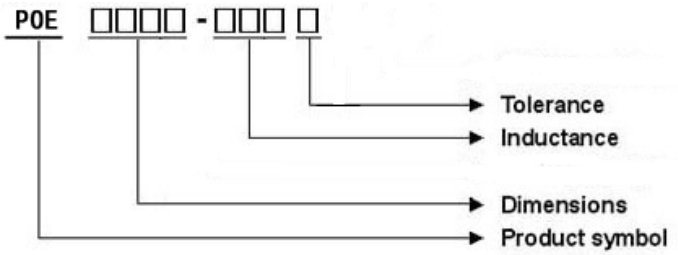
Features

- RoHS compliant
- High energy storage and very low resistance.
- Smallest size and high performance

Applications

- Notebook computers, Step-up and step-down converters
- Flash, memory programmers. etc..

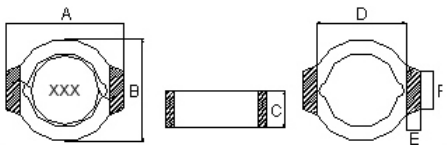
Product Identification



Shapes and Dimensions

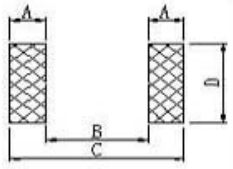
Recommended Pattern

POE 04LP



Dimensions in mm

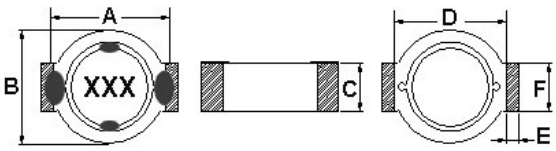
TYPE	A	B	C	D	E	F
POE04LP	6.5^{+0}	5.6^{+0}	1.0±0.2	4.8Ref	0.8Ref	2.0Ref



Dimensions in mm

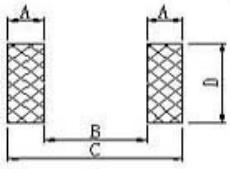
TYPE	A	B	C	D
POE04LP	1.40	4.06	6.86	3.56

POE0400



Dimensions in mm

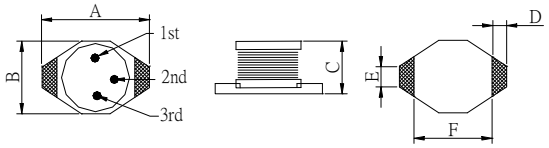
TYPE	A	B	C	D	E	F
POE0400	6.5^{+0}	5.6^{+0}	2.0^{+0}	4.8Ref	0.8Ref	2.0Ref



Dimensions in mm

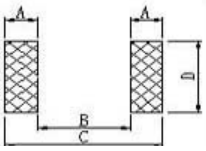
TYPE	A	B	C	D
POE0400	1.40	4.06	6.86	3.56

POE0402



Dimensions in mm

TYPE	A	B	C	D	E	F
POE0402	6.60^{+0}	4.45^{+0}	2.92^{+0}	1.02	1.27	4.32



Dimensions in mm

TYPE	A	B	C	D
POE0402	1.40	4.06	6.86	3.56

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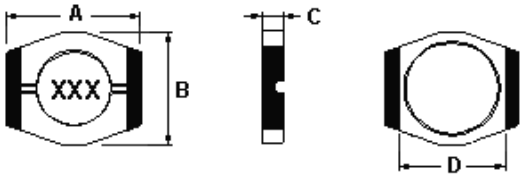
POE 0614

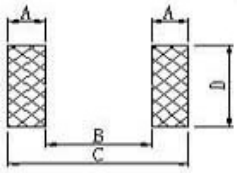
Shapes and Dimensions



Dimensions in mm

A	B	C	D
9.14^{+0}.	7.87^{+0}	1.65^{+0}	7.24^{+0}

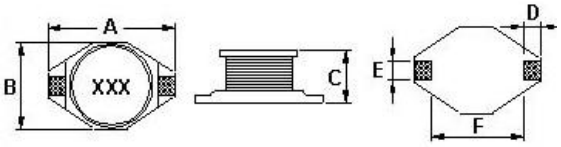
Recommended Pattern



Dimensions in mm

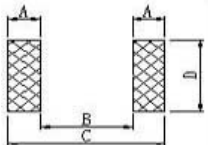
A	B	C	D
1.21	7.24	9.66	5.84

POE0802/ 0804/ 0810



Dimensions in mm

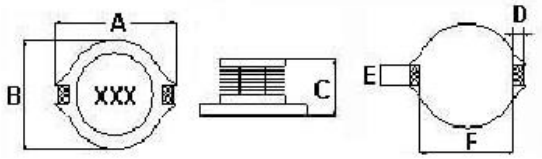
TYPE	A	B	C	D	E	F
POE0802	12.95^{+0}	9.4^{+0}	3.0^{+0}	2.54	2.54	7.62
POE0804	12.95^{+0}	9.40^{+0}	5.21^{+0}	2.54	2.54	7.62
POE0810	12.95^{+0}	9.40^{+0}	11.43^{+}	2.54	2.54	7.62



Dimension in mm

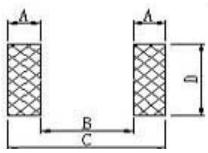
TYPE	A	B	C	D
POE0802	2.92	7.37	13.21	2.79
POE0804	2.92	7.37	13.21	2.79
POE0810	2.92	7.37	13.21	2.79

POE1306



Dimensions in mm

TYPE	A	B	C	D	E	F
POE1306	18.54^{+0}	15.24^{+0}	7.11^{+0}	2.54	2.54	12.7



Dimension in mm

TYPE	A	B	C	D
POE1306	2.92	12.45	18.29	2.79

Electrical Characteristics

Part Number	Inductance① (μH))	Tolerance (±%)	DC Resistance (Ω) Max	I sat② (A)	I rms③ (A)
POE04LP-1R2M	1.2	20	0.08	2.10	3.60
POE04LP-1R5M	1.5	20	0.10	1.90	2.80
POE04LP-2R2M	2.2	20	0.12	1.60	2.40
POE04LP-3R3M	3.3	20	0.16	1.30	2.00
POE04LP-4R7M	4.7	20	0.20	1.10	1.70
POE04LP-6R8M	6.8	20	0.32	0.90	1.20
POE04LP-100M	10	20	0.41	0.80	1.10
POE04LP-150M	15	20	0.55	0.65	0.90
POE04LP-220M	22	20	0.85	0.50	0.83
POE04LP-330M	33	20	1.30	0.40	0.62
POE04LP-470M	47	20	1.80	0.35	0.52
POE04LP-680M	68	20	2.50	0.30	0.35
POE04LP-101M	100	20	3.50	0.25	0.27
POE04LP-151M	150	20	5.00	0.18	0.24
POE04LP-221M	220	20	7.00	0.16	0.23
POE04LP-331M	330	20	15.0	0.13	0.13

1. Inductance tested at 100 KHz, 0.1 Vrms.
2. Inductance drop = 10% typ. at Isat.
3. ΔT = 40℃ rise typ at Irms.

- Tolerance: M = ±20%
- Operating temperature range －４０℃～１２５℃ (Including self - temperature rise)

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Electrical Characteristics

Part Number	Inductance① (μH)	Tolerance (±%)	DC Resistance (Ω) Max	I sat② (A)	I rms③ (A)
POE0400 -1R0M	1.0	20	0.05	2.50	2.3
POE0400 -1R5M	1.5	20	0.06	2.20	2.1
POE0400 -2R2M	2.2	20	0.07	1.80	1.7
POE0400 -3R3M	3.3	20	0.12	1.40	1.3
POE0400 -4R7M	4.7	20	0.15	1.20	1.1
POE0400 -6R8M	6.8	20	0.20	1.10	1.0
POE0400 -100M	10	20	0.30	1.00	0.90
POE0400 -150M	15	20	0.40	0.80	0.70
POE0400 -220M	22	20	0.54	0.60	0.50
POE0400 -330M	33	20	0.74	0.50	0.45
POE0400 -470M	47	20	1.1	0.45	0.40
POE0400 -680M	68	20	1.6	0.35	0.35
POE0400 -101M	100	20	2.3	0.30	0.30
POE0400 -151M	150	20	3.5	0.25	0.25
POE0400 -221M	220	20	5.7	0.20	0.18
POE0400 -331M	330	20	8.2	0.16	0.16
POE0400 -471M	470	20	10.8	0.14	0.12
POE0400 -681M	680	20	17.2	0.12	0.10
POE0400 -102M	1000	20	22.6	0.08	0.08

1. Inductance tested at 100 KHz, 0.1 Vrms.
2. Inductance drop = 10% typ. at Isat.
3. ΔT = 40℃ rise typ at Irms.

- Tolerance: M = ±20%
- Operating temperature range－４０℃～１２５℃ (Including self - temperature rise)

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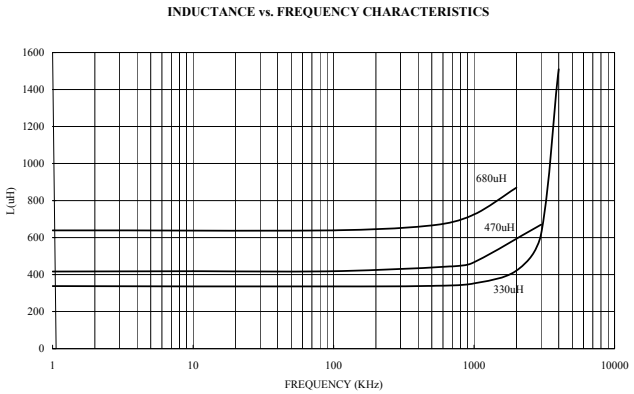
Electrical Characteristics

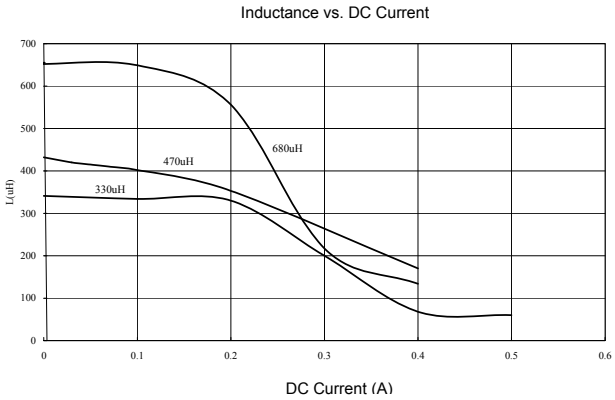
Part Number	Inductance① (μH)	Tolerance (±%)	SRF (MHz) Typ	DC Resistance (Ω) Max	Isat② (A)	Irms③ (A)
POE0402 -1R0M	1.0	20	130	0.05	2.90	2.9
POE0402 -1R5M	1.5	20	115	0.05	2.60	2.8
POE0402 -2R2M	2.2	20	90	0.07	2.30	2.4
POE0402 -3R3M	3.3	20	70	0.08	2.00	2.0
POE0402 -4R7M	4.7	20	50	0.09	1.50	1.5
POE0402 -6R8M	6.8	20	45	0.13	1.20	1.4
POE0402 -100M	10	20	35	0.16	1.10	1.1
POE0402 -150M	15	20	30	0.23	0.90	1.2
POE0402 -220M	22	20	20	0.37	0.70	0.8
POE0402 -330M	33	20	15	0.51	0.58	0.6
POE0402 -470M	47	20	14	0.64	0.50	0.5
POE0402 -680M	68	20	11	0.86	0.40	0.4
POE0402 -101M	100	20	9	1.27	0.31	0.3
POE0402 -151M	150	20	6	2.00	0.27	0.25
POE0402 -221M	220	20	5.5	3.11	0.22	0.20
POE0402 -331M	330	20	5	3.80	0.18	0.16
POE0402 -471M	470	20	4	5.06	0.16	0.15
POE0402 -681M	680	20	3	9.20	0.14	0.12
POE0402 -102M	1000	20	2	13.8	0.10	0.07

1. Inductance tested at 100 KHz, 0.1 Vrms.
2. Inductance drop = 20% typ. at Isat.
3. ΔT = 30℃ rise typ at Irms.

- Tolerance: M = ±20%
- Operating temperature range －40℃～125℃ (Including self - temperature rise)

Test Instruments：





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AMAX ELECTRONICS COMPANY

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	D.C. Resistance (Ω) Max	Isat (A)
POE 0614 -4R7M	4.7	20	0.145	1.60
POE 0614 -6R8M	6.8	20	0.165	1.30
POE 0614 -100M	10	20	0.240	1.00
POE 0614 -150M	15	20	0.300	0.90
POE 0614 -220M	22	20	0.420	0.70
POE 0614 -330M	33	20	0.550	0.60
POE 0614 -470M	47	20	0.765	0.40
POE 0614 -680M	68	20	1.10	0.40
POE 0614 -101M	100	20	1.60	0.30
POE 0614 -151M	150	20	2.50	0.25
POE 0614 -221M	220	20	3.65	0.22
POE 0614 -331M	330	20	4.65	0.18
POE 0614 -471M	470	20	6.75	0.14
POE 0614 -681M	680	20	9.15	0.12
POE 0614 -102M	1000	20	14.2	0.10

- Inductance tested at 100 KHz, 0.1 Vrms.I
- Inductance drop = 10% typ. at Isat
- Tolerance: M = ±20%

Multilayer Chip Inductor

AMAX ELECTRONICS COMPANY

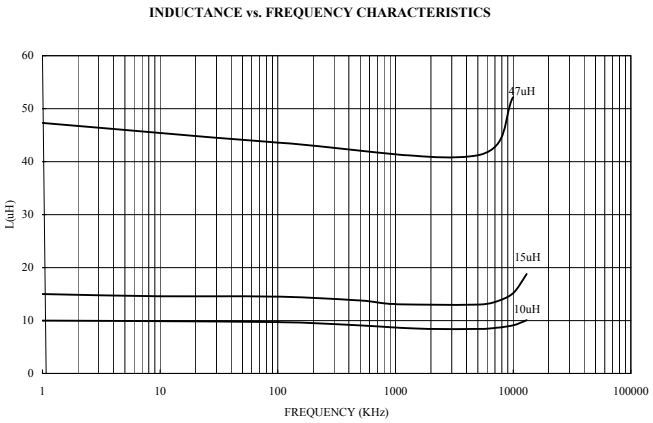
Electrical Characteristics

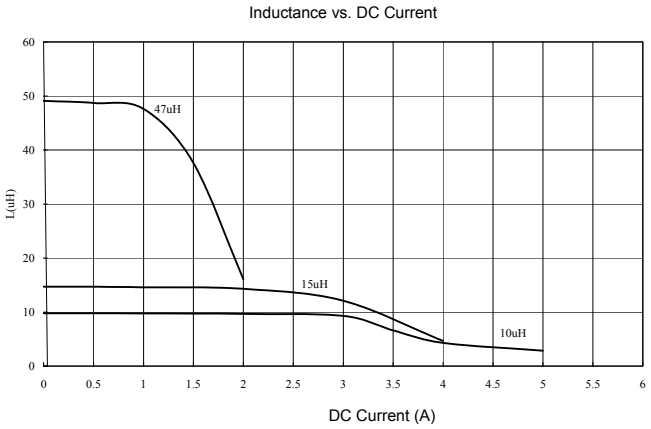
Part Number	Inductance① (μH)	Tolerance (±%)	SRF (MHz) Typ	DC Resistance (Ω) Max	Isat② (A)	Irms③ (A)
POE0802 -100M	10	20	35	0.09	2.4	2.0
POE0802 -150M	15	20	33	0.12	2.0	1.5
POE0802 -220M	22	20	25	0.19	1.6	1.3
POE0802 -330M	33	20	19	0.25	1.4	1.1
POE0802 -470M	47	20	14	0.32	1.0	0.8
POE0802 -680M	68	20	12	0.55	0.9	0.7
POE0802 -101M	100	20	10	0.70	0.7	0.6
POE0802 -151M	150	20	8	1.00	0.6	0.5
POE0802 -221M	220	20	6	1.60	0.5	0.4
POE0802 -331M	330	20	5	2.20	0.4	0.3
POE0802 -471M	470	20	4	3.30	0.3	0.2
POE0802 -681M	680	20	3	4.40	0.2	0.1
POE0802 -102M	1000	20	2.5	7.00	0.1	0.05

1. Inductance tested at 100 KHz, 0.1 Vrms.
2. Inductance drop = 20% typ. at Isat.
3. ΔT = 30℃ rise typ at Irms.

- Tolerance: M = ±20%
- Operating temperature range －40℃～125℃ (Including self - temperature rise)

Test Instruments：





Multilayer Chip Inductor

AMAX ELECTRONICS COMPANY

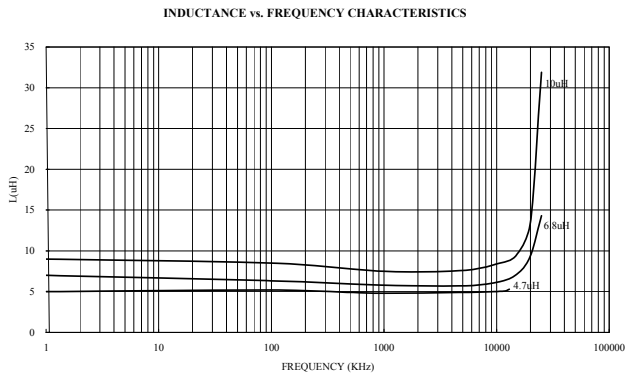
Electrical Characteristics

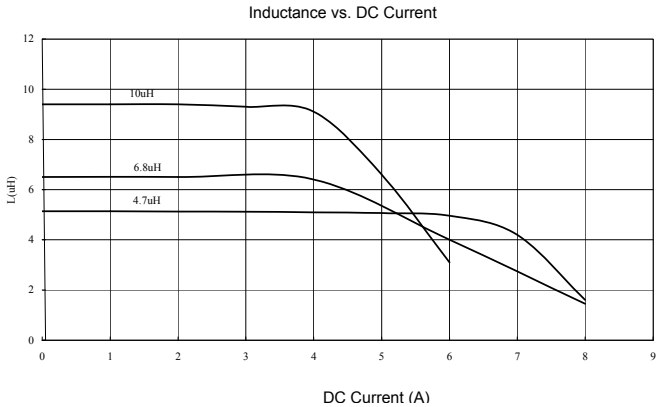
Part Number	Inductance① (μH)	Tolerance (±%)	SRF (MHz) Typ	DC Resistance (Ω) Max	Isat② (A)	Irms③ (A)
POE0804 -1R0M	1.0	20	100	0.009	9.0	6.8
POE0804 -1R5M	1.5	20	90	0.010	8.0	6.4
POE0804 -2R2M	2.2	20	80	0.012	7.0	6.1
POE0804 -3R3M	3.3	20	65	0.015	6.4	5.4
POE0804 -4R7M	4.7	20	45	0.018	5.4	4.8
POE0804 -6R8M	6.8	20	38	0.027	4.6	4.4
POE0804 -100M	10	20	30	0.038	3.8	3.9
POE0804 -150M	15	20	27	0.046	3.0	3.1
POE0804 -220M	22	20	19	0.085	2.6	2.7
POE0804 -330M	33	20	15	0.100	2.0	2.1
POE0804 -470M	47	20	12	0.140	1.6	1.8
POE0804 -680M	68	20	10	0.200	1.4	1.5
POE0804 -101M	100	20	9	0.260	1.2	1.3
POE0804 -151M	150	20	6	0.400	1.0	1.0
POE0804 -221M	220	20	5	0.610	0.8	0.8
POE0804 -331M	330	20	4.5	1.020	0.6	0.6
POE0804 -471M	470	20	3.5	1.270	0.5	0.5
POE0804 -681M	680	20	2.5	2.020	0.4	0.4
POE0804 -102M	1000	20	2.0	3.000	0.3	0.3

1. Inductance tested at 100 KHz, 0.1 Vrms.
2. Inductance drop = 20% typ. at Isat.
3. ΔT = 15℃ rise typ at Irms.

- Tolerance: M = ±20%
- Operating temperature range －４０℃～１２５℃ (Including self - temperature rise)

Test Instruments：





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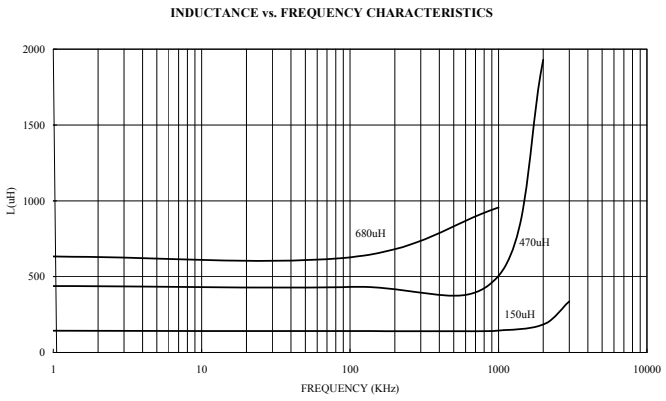
Electrical Characteristics

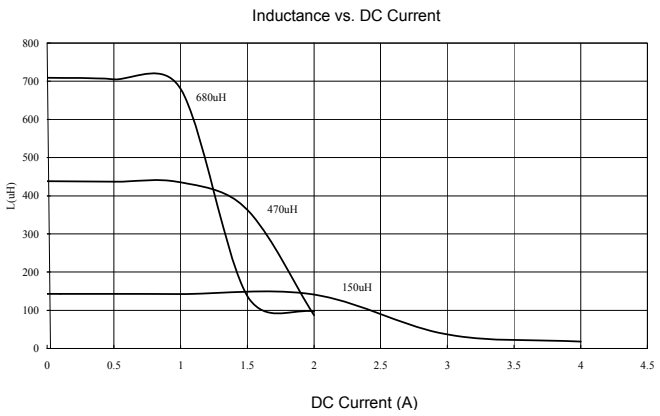
Part Number	Inductance① (μH)	Tolerance (±%)	DC Resistance (Ω) Max	SRF (MHz) Typ	Isat② (A)	Irms③ (A)
POE0810T-100M	10	20	0.033	22	8.0	3.5
POE0810T-150M	15	20	0.042	18	7.0	3.0
POE0810T-220M	22	20	0.054	11	5.5	2.5
POE0810T-330M	33	20	0.08	9	4.0	2.0
POE0810T-470M	47	20	0.10	8	3.8	1.6
POE0810T-680M	68	20	0.17	7	3.0	1.2
POE0810T-101M	100	20	0.22	5	2.5	1.2
POE0810T-151M	150	20	0.34	4	2.0	0.9
POE0810T-221M	220	20	0.44	3.5	1.6	0.7
POE0810T-331M	330	20	0.70	2.5	1.2	0.6
POE0810T-471M	470	20	0.95	2	1.0	0.3
POE0810T-681M	680	20	1.2	2	1.0	0.2
POE0810T-102M	1000	20	2.0	1.5	0.8	0.1

1. Inductance tested at 100 KHz, 0.1 Vrms.
2. Inductance drop = 20% typ. at Isat.
3. ΔT = 40℃ rise typ at Irms.

- Tolerance: M = ±20%
- Operating temperature range －４０℃～１２５℃ (Including self - temperature rise)

Test Instruments：





Multilayer Chip Inductor

AMAX ELECTRONICS COMPANY

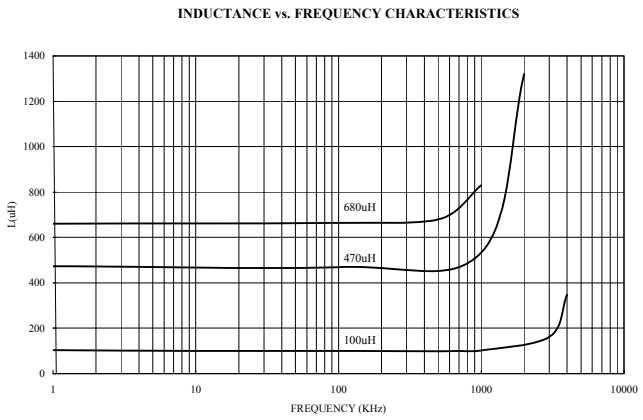
Electrical Characteristics

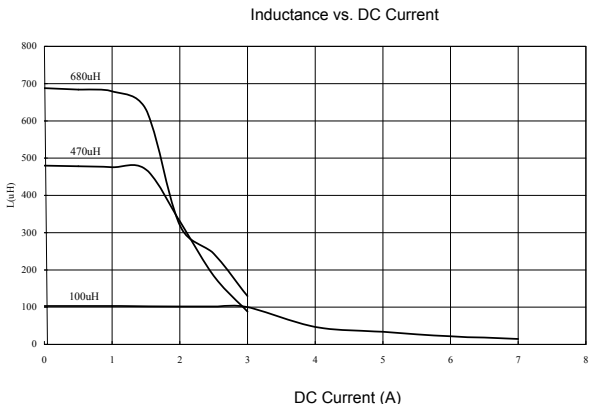
Part Number	Inductance① (μH)	Tolerance (±%)	SRF (MHz) Typ	DC Resistance (Ω+15%)	Isat② (A)	Irms③ (A)
POE1306 -1R0M	1.0	20	80	0.011	20	8.6
POE1306 -2R2M	2.2	20	80	0.014	16	7.1
POE1306 -3R3M	3.3	20	60	0.016	14	6.2
POE1306 -5R6M	5.6	20	40	0.022	12	5.3
POE1306 -100M	10	20	30	0.032	10	4.3
POE1306 -150M	15	20	22	0.036	8.0	4.0
POE1306 -220M	22	20	20	0.047	7.0	3.5
POE1306 -330M	33	20	15	0.066	5.5	3.0
POE1306 -470M	47	20	9	0.087	4.5	2.6
POE1306 -680M	68	20	8	0.13	3.5	2.3
POE1306 -101M	100	20	7	0.19	3.0	1.8
POE1306 -151M	150	20	6	0.25	2.6	1.5
POE1306 -221M	220	20	5	0.38	2.4	1.2
POE1306 -331M	330	20	4	0.56	1.9	1.0
POE1306 -471M	470	20	3	0.85	1.4	0.82
POE1306 -681M	680	20	2.5	1.2	1.2	0.72
POE1306 -102M	1000	20	2	1.8	1.0	0.56

1. Inductance tested at 100 KHz, 0.1 Vrms.
2. Inductance drop = 20% typ. at Isat.
3. ΔT = 40℃ rise typ at Irms.

- Tolerance: M = ±20%
- Operating temperature range －４０℃～１２５℃ (Including self - temperature rise)

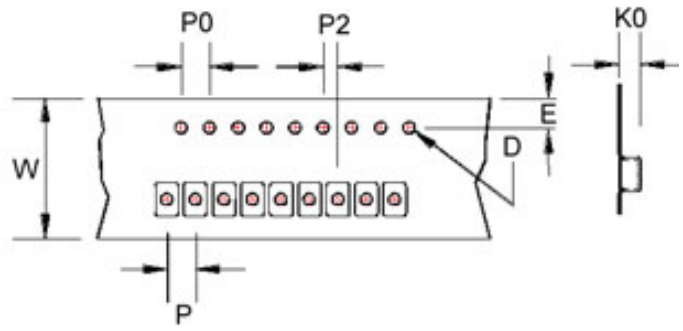
Test Instruments：



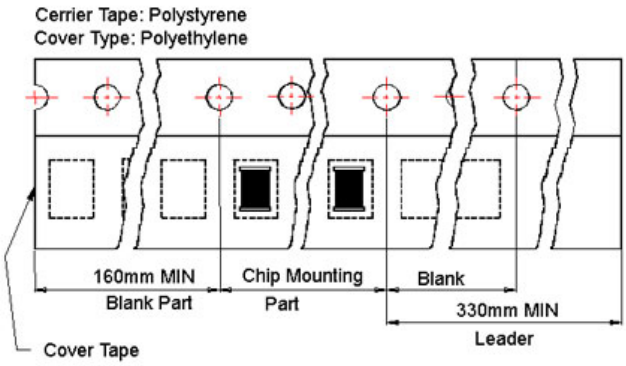


Packaging Specifications

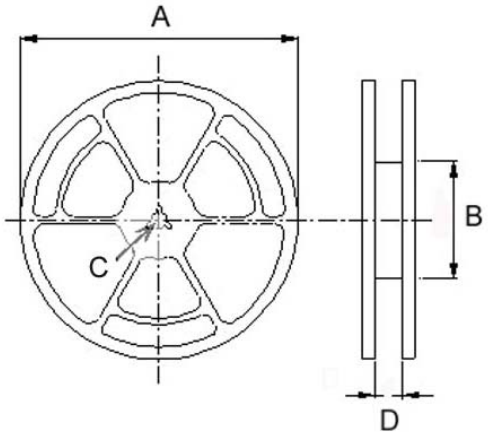
Tape Dimensions



Tape Material



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity (PCS / REEL)	
	K0	D	E	W	P	P0	P2	A	B	C	D	178mm	330mm
POE 04LP	1.30	1.5	1.75	12	8	4	2	330	100	13	13.4	-	3500
								178	60		13.2	1000	-
POE 0400	1.85	1.5	1.75	12	8	4	2	330	100	13	13.4	-	3500
								178	60		13.2	1000	-
POE0402	3.2	1.55	1.75	12	8	4	2	330	100	13	13.4	-	2500
								178	60		13.2	750	-
POE 0614	1.8	1.5	1.75	16	12	4	2	330	100	13	17.4	-	2500
POE 0802	3.75	1.55	1.75	24	16	4	2	330	100	13	24.4	-	1000
POE 0804	5.4	1.55	1.75	24	16	4	2	330	100	13	24.4	-	750
POE 0810	11.5	1.55	1.75	24	20	4	2	330	100	13	24.4	-	225
POE 1306	7.5	1.55	1.75	32	20	4	2	330	100	13	33.4	-	250