



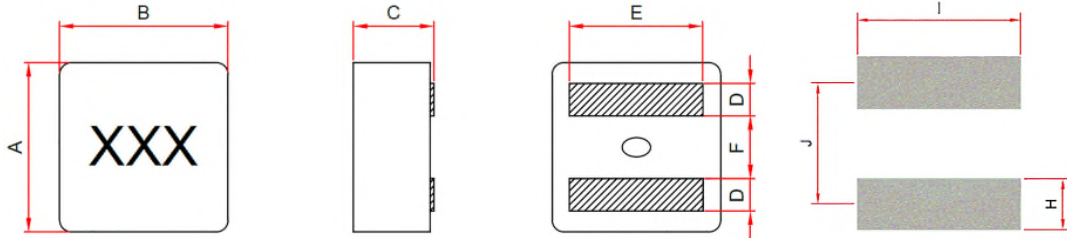
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Shielded SMT Power Inductor AEC-Q200 standard compliance STUA07-W Series

■ SHAPES AND DIMENSIONS



Unit: mm

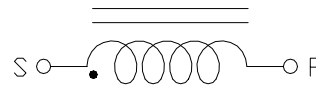
Recommend PAD Layout

P/N	A	B	C	D	E	F	H	I	J
STUA0721W	7.60±0.20	7.80±0.25	2.10 Max	1.75±0.3	See table	3.15±0.3	2.30	7.20	5.10
STUA0731W	7.60±0.20	7.80±0.25	3.10 Max	1.75±0.3	See table	3.15±0.3	2.30	7.20	5.10
STUA0707W	7.60±0.25	7.80±0.25	7.00 Max	1.75±0.3	See table	3.15±0.3	2.50	6.70	5.30

Marking :

XXX = Inductance

Equivalent circuit





■ PART NUMBER CODE

STUA 0721 W - 1R0 M A
1 2 3 4 5 6

1. Series Name
2. Size Code
3. Type Code
4. Inductance(R=Decimal Point) Unit : μH ; 1R0 =1.0 μH
5. Inductance tolerance: "M" \pm 20%
6. Soldering : A=Lead Free

■ ELECTRICAL CHARACTERISTICS

1. Test equipments

- 1.1. L : HP4285A,CH11025,CH3302,CH1320,CH1320S LCR Meter.
- 1.2. DCR: Chroma16502 Milliohm Meter.
- 1.3. Operating temperature range from -55 $^{\circ}\text{C}$ to 155 $^{\circ}\text{C}$ (includes self-temperature rise)

The part temperature (ambient + temp rise) should not exceed 155 $^{\circ}\text{C}$ under the worst case operating condition. Circuit design, component, PCB trace size and thickness airflow and other cooling provisions all could affect the part temperature. Part temperature should be verified in the end application.

* Equivalent measurement equipment may be used.



2. Part Number and Characteristics Table

Part No.	Inductance L0 (uH)	Tolerance (±%)	DCR(mΩ)	Isat(A)		Irms(A)		E(mm)
			Max.	Max.	Typ.	Max.	Typ.	±0.3
STUA0721W-R27MA	0.27	20	3.5	27.0	35.0	16.0	21.0	6.60
STUA0721W-R31MA	0.31	20	4.8	26.0	34.0	14.0	20.0	6.20
STUA0721W-R33MA	0.33	20	4.8	26.0	34.0	13.0	19.0	6.20
STUA0721W-R47MA	0.47	20	6.2	24.0	28.0	12.0	17.0	6.20
STUA0721W-R68MA	0.68	20	9.2	22.0	25.0	10.0	13.0	6.20
STUA0721W-1R0MA	1.00	20	10.8	20.0	23.0	8.0	11.0	6.20

Note:

- All test data is referenced to 25°C ambient.
- Test Condition: 100KHz, 0.1 Vrms.
- Isat (Typ): DC current (A) that will cause L0 to drop approximately 30%.
- Irms (Typ): DC current (A) that will cause an approximate ΔT of 40°C.



Part No.	Inductance L0 (uH)	Tolerance (±%)	DCR(mΩ)	Isat(A)		Irms(A)		E(mm)
			Max.	Max.	Typ.	Max.	Typ.	±0.3
STUA0731W-1R0MA	1.00	20	5.00	22.5	27.0	16.1	21.8	6.60
STUA0731W-1R5MA	1.50	20	8.25	20.5	23.5	12.0	15.3	6.60
STUA0731W-2R2MA	2.20	20	13.7	17.0	19.0	10.0	13.0	6.20
STUA0731W-2R7MA	2.70	20	15.4	13.5	16.0	9.20	11.4	6.20
STUA0731W-3R3MA	3.30	20	18.0	13.0	15.0	8.00	10.0	6.20
STUA0731W-4R7MA	4.70	20	26.7	9.5	12.0	6.90	9.00	6.20
STUA0731W-5R6MA	5.60	20	33.2	9.0	11.0	5.30	7.30	6.20
STUA0731W-6R8MA	6.80	20	42.5	8.0	10.0	4.50	6.80	6.20
STUA0731W-8R2MA	8.20	20	48.73	7.0	9.0	3.00	5.90	6.20

Note:

- All test data is referenced to 25°C ambient.
- Test Condition: 100KHz, 0.1 Vrms.
- Isat (Typ): DC current (A) that will cause L0 to drop approximately 30%.
- Irms (Typ): DC current (A) that will cause an approximate ΔT of 40°C.



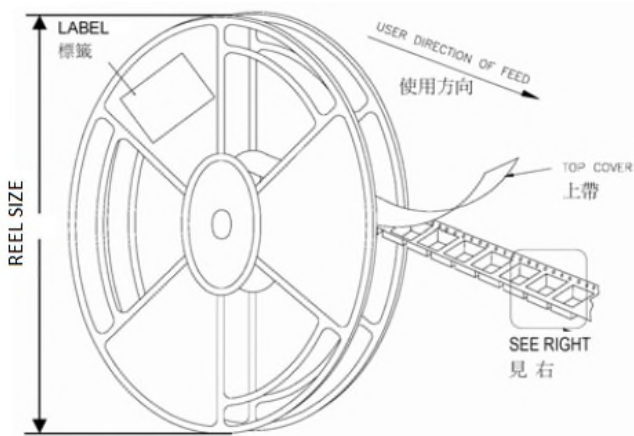
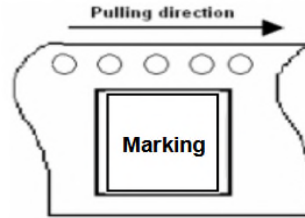
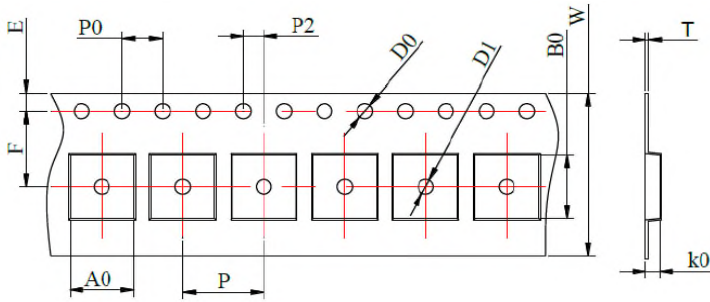
Part No.	Inductance L0 (uH)	Tolerance (±%)	DCR(mΩ)	Isat(A)		Irms(A)		E(mm)
			Max.	Max.	Typ.	Max.	Typ.	±0.3
STUA0707W-1R0MA	1.0	20	2.81	31.8	34.8	20.0	25.0	6.70
STUA0707W-1R8MA	1.8	20	4.46	21.5	25.0	15.8	21.0	6.70
STUA0707W-3R3MA	3.3	20	9.42	13.5	17.0	11.5	15.1	6.70
STUA0707W-4R7MA	4.7	20	13.5	11.0	14.0	10.5	13.6	6.70
STUA0707W-6R8MA	6.8	20	19.6	10.0	12.0	7.0	9.5	6.50

Note:

- All test data is referenced to 25°C ambient.
- Test Condition: 100KHz, 0.1 Vrms.
- Isat (Typ): DC current (A) that will cause L0 to drop approximately 30%.
- Irms (Typ): DC current (A) that will cause an approximate ΔT of 40°C .



REEL DIMENSIONS AND PACKAGING QUANTITY



Unit: mm

TYPE	W	P	REEL SIZE	PCS / REEL
STUA0721W	16	12	330 mm (13")	2000
STUA0731W	16	12	330 mm (13")	1500
STUA0707W	16	12	330 mm (13")	700