



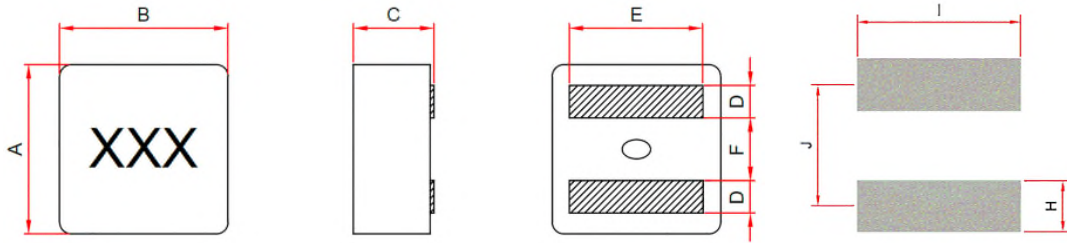
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## Shielded SMT Power Inductor STU10-W Series

### ■ SHAPES AND DIMENSIONS



Unit: mm

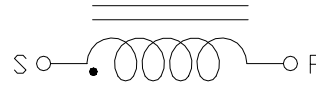
Recommend PAD Layout

P/N	A	B	C	D	E	F	H	I	J
STU1031W	11.0±0.3	11.9±0.3	3.10 Max	2.40±0.3	9.0±0.5	4.40±0.5	3.40	11.0	7.10
STU1006W	11.0±0.3	11.9±0.3	6.00 Max	2.40±0.3	See table	4.50±0.5	3.40	11.0	7.10
STU1010W	11.0±0.3	11.9±0.3	10.0 Max	2.40±0.3	See table	4.40±0.5	3.40	11.0	7.10

Marking :

XXX = Inductance

Equivalent circuit





## ■ PART NUMBER CODE

STU   1031   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 :  $\mu\text{H}$  ; 1R0 =1.0 $\mu\text{H}$
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  $125^{\circ}\text{C}$  (includes self-temperature rise)

The part temperature (ambient + temp rise) should not exceed  $125^{\circ}\text{C}$  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)	
			Max.	Max.	Typ.	Max.	Typ.
STU1031W-R28MA	0.28	20	1.60	55.0	65.0	25.5	35.0
STU1031W-R56MA	0.56	20	2.75	39.0	44.0	23.0	32.0
STU1031W-R82MA	0.82	20	4.10	32.0	38.0	18.0	25.0
STU1031W-R90MA	0.90	20	4.20	31.0	36.0	17.0	24.0
STU1031W-1R0MA	1.00	20	4.95	30.0	35.0	16.0	23.0
STU1031W-1R5MA	1.50	20	6.60	23.0	28.0	12.0	18.0

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.	±0.5
STU1006W-R68MA	0.68	20	1.50	50.0	55.0	22.5	34.0	9.50
STU1006W-1R0MA	1.0	20	2.32	44.0	48.0	20.0	28.5	9.00
STU1006W-1R2MA	1.2	20	2.64	40.0	45.0	18.0	26.5	9.00
STU1006W-1R5MA	1.5	20	3.30	35.0	40.0	16.0	24.5	9.00
STU1006W-2R2MA	2.2	20	4.84	29.0	34.0	14.0	20.0	9.00
STU1006W-3R3MA	3.3	20	7.70	22.0	26.0	11.4	16.8	9.00
STU1006W-4R7MA	4.7	20	10.72	20.0	25.0	8.7	14.0	9.00

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 .



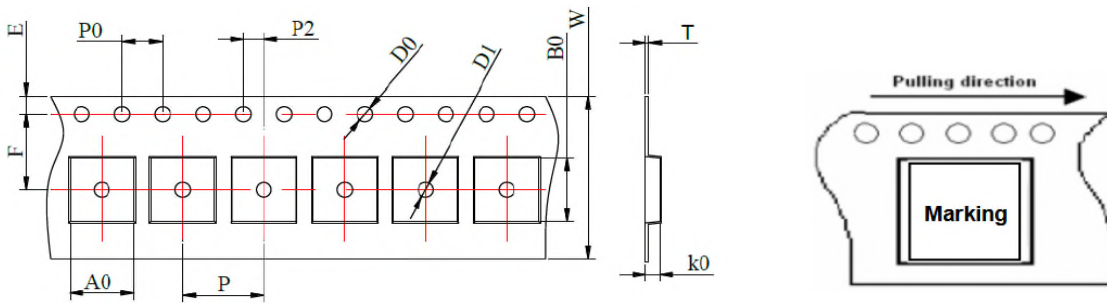
Part No.	Inductance L0 ( uH )	Tolerance (±%)	DCR(mΩ)	Isat(A)		Irms(A)		E(mm)
			Max.	Max.	Typ.	Max.	Typ.	±0.5
STU1010W-2R2MA	2.2	20	2.8	29.0	34.0	24.5	32.0	9.30
STU1010W-3R3MA	3.3	20	4.1	23.4	27.4	18.2	25.0	9.30
STU1010W-4R7MA	4.7	20	5.7	20.0	24.0	17.5	24.0	9.30
STU1010W-5R6MA	5.6	20	7.2	19.0	23.0	15.7	21.2	9.30
STU1010W-6R8MA	6.8	20	8.9	18.5	21.8	14.0	18.5	9.00
STU1010W-8R2MA	8.2	20	12.4	16.3	18.3	12.9	17.1	9.00
STU1010W-100MA	10.0	20	13.75	14.6	17.5	11.5	15.5	9.00
STU1010W-150MA	15.0	20	19.30	11.0	13.5	9.9	13.8	9.00

Note:

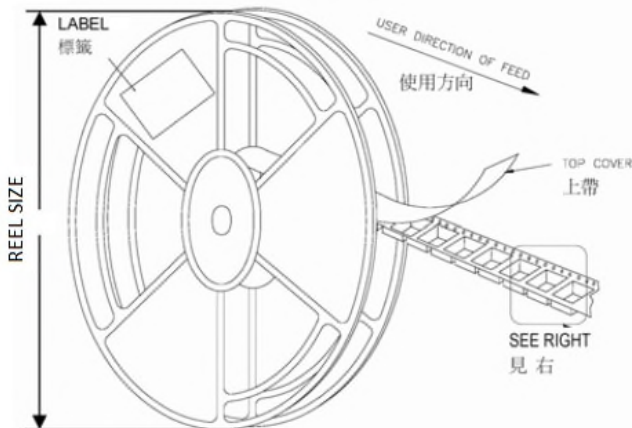
- All test data is referenced to 25°C ambient.
- Test Condition: 100KHz, 0.1 Vrms.
- Isat (Typ): DC current ( A ) that will cause L0 to drop approximately 30%.
- Irms (Typ): DC current ( A ) that will cause an approximate ΔT of 40°C.



## REEL DIMENSIONS AND PACKAGING QUANTITY



Tape dimensions (mm)												
P/N	W	P	P0	P2	D0	D1	T	A0	B0	K0	E	F
STU1031W	24±0.3	16±0.1	4±0.1	2±0.5	1.5±0.1	1.5±0.1	0.35±0.05	12.4±0.1	11.5±0.1	3.3±0.1	1.75±0.1	11.5±0.1
STU1006W	24±0.3	16±0.1	4±0.1	2±0.5	1.5±0.1	1.5±0.1	0.35±0.05	12.4±0.1	11.5±0.1	6.3±0.1	1.75±0.1	11.5±0.1
STU1010W	24±0.3	16±0.1	4±0.1	2±0.5	1.5±0.1	1.5±0.1	0.35±0.05	12.4±0.1	11.5±0.1	10.3±0.1	1.75±0.1	11.5±0.1



Unit: mm

TYPE	W	P	REEL SIZE	PCS / REEL
STU1031W	24	16	330 mm (13")	1000
STU1006W	24	16	330 mm (13")	500
STU1010W	24	16	330 mm (13")	300