![muRata Ps — Murata Power Solutions]

FEATURES

- RoHS compliant
- 1.0µH to 1.0mH
- Up to 10A I$_{DC}$
- Bobbin format
- Surface mount
- Integral EMI shield
- Compact size
- Tape and reel packaging
- UL 94V-0 materials
- J-STD-020-C reflow

DESCRIPTION

The 4700S series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a low-profile package. The devices have an integral ferrite shield to reduce EMI.

PIN CONNECTIONS (TOP VIEW)
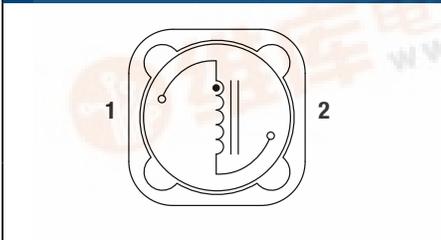
SELECTION GUIDE

Order Code	Inductance (10kHz, 100mV$_{AC}$) ±20%	DC Current[1]	DC Resistance	SRF	Q Factor	
	Nom.	Max.	Max.	Typ.	Typ.	
	µH	A	mΩ	MHz	Q	@ f (MHz)
471R0SC	1.0 (±30%)	10.0	4.8	79	24	1
472R2SC	2.2 (±30%)	7.0	8.5	44	24	1
473R3SC	3.3 (±30%)	6.4	11.1	36	25	1
474R7SC	4.7 (±30%)	5.8	16.4	34	25	1
476R8SC	6.8 (±30%)	4.6	26.9	24	24	1
47100SC	10	3.8	32.3	22	22	1
47150SC	15	3.2	46.5	18	29	1
47220SC	22	2.7	62.9	14	29	1
47330SC	33	2.2	91.1	13	23	1
47470SC	47	1.9	168	11	23	1
47680SC	68	1.6	210	9	23	1
47101SC	100	1.3	267	8	20	0.8
47151SC	150	1.1	410	7	19	0.8
47221SC	220	0.8	629	6	20	0.8
47331SC	330	0.7	940	5	21	0.8
47471SC	470	0.58	1330	5	23	0.8
47681SC	680	0.48	1780	4	17	0.8
47102SC	1000	0.40	2540	4	17	0.8

MECHANICAL DIMENSIONS

Recommended Footprint Details
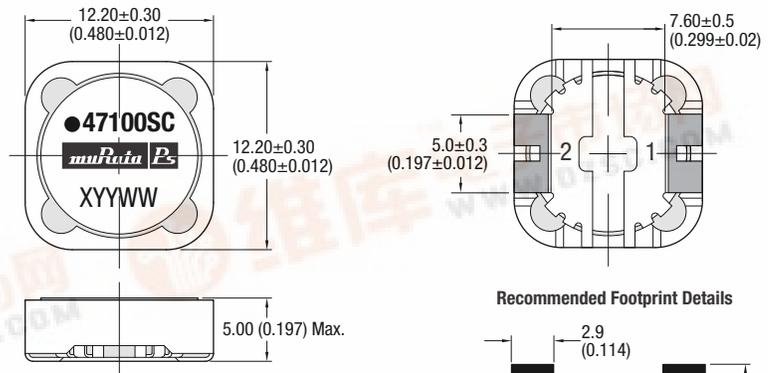
Dot signifies the innermost turn of the winding.
All dimensions in mm (inches). Package weight: 2.4g Typ.

ABSOLUTE MAXIMUM RATINGS

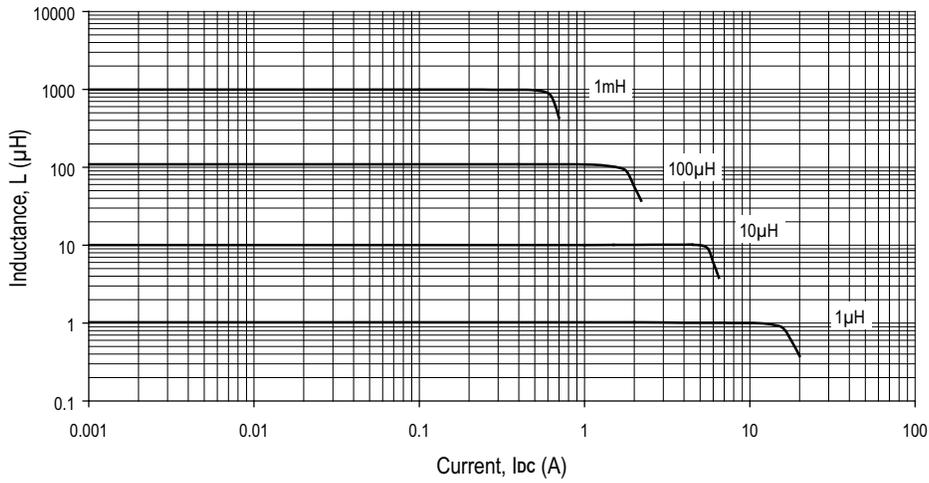|	
Operating free air temperature range	-40ºC to 85ºC
Storage temperature range	-40ºC to 125ºC

SOLDERING INFORMATION[2]

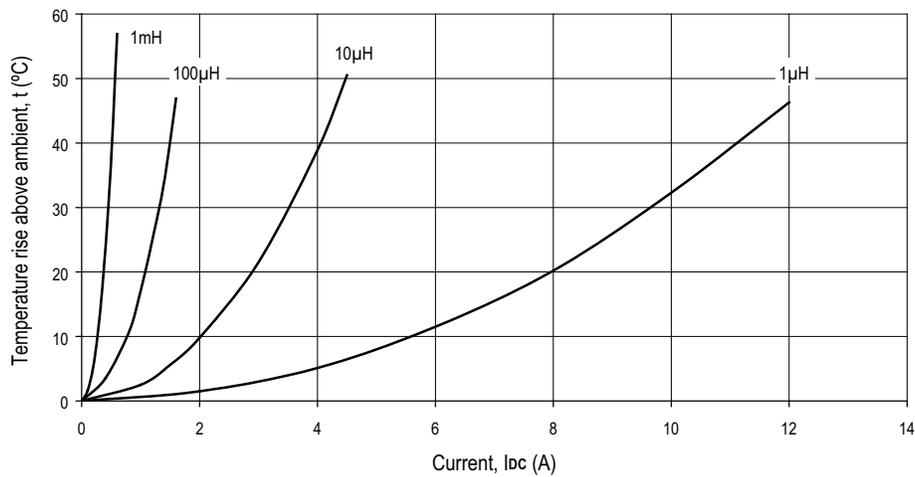|	
Peak reflow solder temperature	245ºC
Pin finish	Tin

Specifications typical at T$_A$ = 25°C

1 Maximum DC current occurs when either the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
2 For further information, please visit www.murata-ps.com/rohs

INDUCTANCE Vs CURRENT

Inductance, L (µH) vs Current, I$_{DC}$ (A)

1mH
100µH
10µH
1µH

TEMPERATURE Vs CURRENT

Temperature rise above ambient, t (°C) vs Current, I$_{DC}$ (A)

1mH
100µH
10µH
1µH

INDUCTANCE Vs FREQUENCY

Inductance, L (µH) vs Frequency, (kHz)

1mH
100µH
10µH
1µH
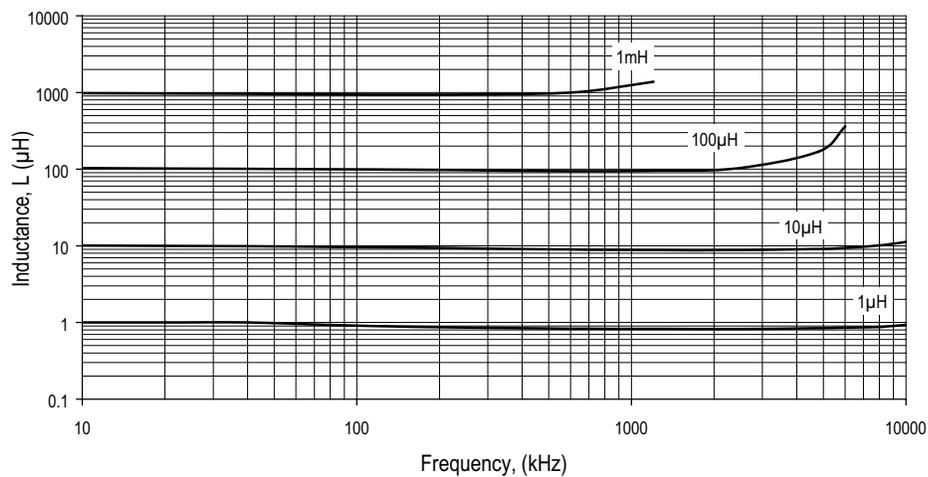
TAPE & REEL SPECIFICATIONS

REEL OUTLINE DIMENSIONS

Ø382 [15.039] Max.

60 [2.36] Min.

Ø $13.50 \begin{bmatrix} \text{Ø } 0.531 \\ 0.504 \end{bmatrix}$ 12.80

1.50 [0.059] Min.

Ø20.20 [Ø0.795] Min.

All dimensions in mm (inches)
*   Includes flange distortion at outer edge
†   Measured at hub

23.9-27.4 [0.94-1.08]*

30.4 [1.197] Max.†

24.4 [0.96]† $^{+2 [0.079]}_{-0 [0]}$

Leader Section 400 [15.748] Min.

100 [3.937] Min.

Goods Enclosure Section

Trailer Section 160 [6.299] Min.

TAPE OUTLINE DIMENSIONS

1.75 (0.069)

4.00 (0.157)

2.00 (0.079)

Ø1.50 $^{+0.10}_{-0.00}$ (Ø0.059 $^{+0.004}_{-0.000}$)

11.5 (0.453)

24.0 $^{+0.30}_{-0.10}$ (0.945 $^{+0.012}_{-0.004}$)

22.3 (0.876) Min.

●4700SC
YYXX
MMAX

0.60 (0.024) Max.

5.2 (0.205)

16.0 (0.630)

DIRECTION OF UNREELING

All dimensions in mm (inches)

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