

SMD Power Inductors - SESI 15WR High Reliability Applications



- Energy storage, smoothing, filtering
- Applied standards: ECSS-Q-70-02, MIL-STD-202, DO-160
- eesa ESCC 3201/009 versions upon request
- Materials meet UL94-V0 rating
- Suited for IR and vapor reflow soldering
- Frequency range up to 1 MHz
- Operating temperature range: -55 °C to +125 °C
- Weight: 5 grams
- Shielded version upon request

Electrical Data (25°C)

ID Code	L^{12} no load μH	I^{18} rated A	L^{24} at rated I μH	I^5 peak max A	Rdc at 25°C m Ω Max	Tol.
SESI 15 1K5 2WR	1.5	14	0.9	19	5.0	30
SESI 15 1K8 1WR	1.8	10	1.05	14	5.0	
SESI 15 2K7 1WR	2.7	8.2	1.9	11.5	6.5	
SESI 15 4K9 1WR	4.9	6.0	3.4	8.5	11	
SESI 15 6K4 1WR	6.4	5.3	4.5	7.5	12	
SESI 15 8K0 1WR	8.0	4.8	5.6	6.5	16	20
SESI 15 12K 1WR	12	4.0	8.4	5.5	23	
SESI 15 16K 1WR	16	3.4	11.2	4.5	27	
SESI 15 18K 1WR	18	3.1	12.6	4.2	29	
SESI 15 21K 1WR	21	2.9	14.7	4.0	36	
SESI 15 27K 1WR	27	2.6	18.9	3.5	44	10
SESI 15 29K 2WR	30	2.6	20	3.5	72	
SESI 15 33K 1WR	33	2.3	23	3.2	59	
SESI 15 48K 1WR	48	1.9	33	2.7	72	
SESI 15 56K 1WR	56	1.8	39	2.5	82	
SESI 15 68K 1WR	68	1.6	47	2.2	110	
SESI 15 82K 1WR	82	1.5	57	2.1	120	
SESI 15 M10 1WR	100	1.35	70	1.9	155	
SESI 15 M12 1WR	120	1.2	84	1.7	180	
SESI 15 M15 1WR	150	1.1	105	1.5	230	
SESI 15 M22 1WR	220	0.9	154	1.3	355	
SESI 15 M33 1WR	330	0.74	231	1.0	630	
SESI 15 M0 1WR	1000	0.38	800	0.5	2127.5	
SESI 15 2M3 1WR	2290	0.28	1900	0.36	4400	

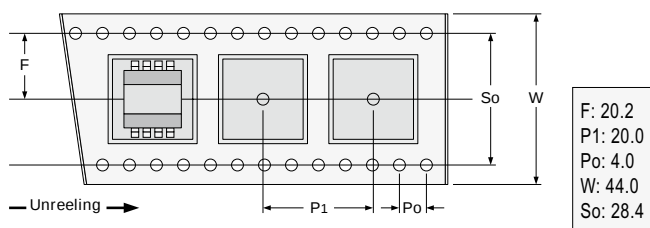
To Order

SESI	15	###	-	W	R
SMD Energy Storage Inductor	Size	Value code 4K9 = 4,9 μH M10 = 100 μH 1M0 = 1000 μH	Version	GW Terminals	High reliability

SESI 15 ### #WR

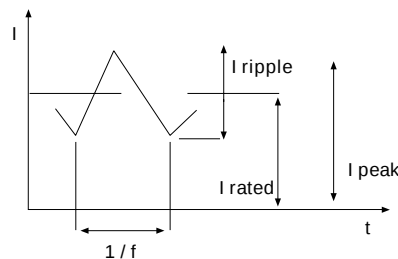
Packaging

Tape and Reel:
400 pieces per reel of diameter 330 mm

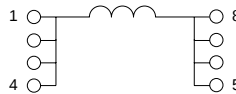


Notes

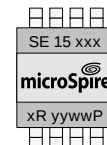
- Inductance at 0.25 V, 100 kHz
- I rated (permanent DC) without heatsink ;
with heatsink $I = I_{\text{rated}} \times 1.4$
- Typical inductance value at recommended full load
- $I_{\text{peak max}}$ = maximum peak value of current at +125 °C; L value not guaranteed
- 40 % admissible I ripple over I rated at $f = 200 \text{ kHz}$
- Isolation voltage 500 Vdc
- 1 min - $R_i > 1 \text{ G}\Omega$ between winding and magnetic core



Connections

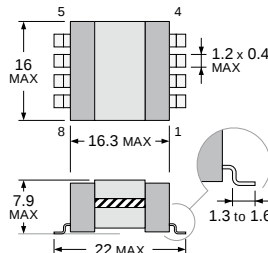


Marking

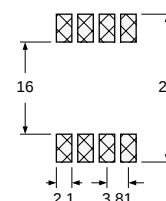


yyww :
Date code

Dimensions (mm, top view)



PCB Layout (suggested)



SMD Power Inductors SESI 15WR



QPL Components

SESI15WR series are usually installed on Military applications and breadboards for Space applications.

Since January 2003, Microspire has been manufacturing Radio Frequency Fixed Coils, SESI15WR series fulfilling ESA ESCC Generic specification N°3201 and detail specification N°3201/009.

This qualification approval includes final production tests Chart II, burn-in and electrical measurements to testing level B Chart III and qualification testing Chart IV.

For procurement, different quality levels are offered :

- Final production tests Chart II
- Burn-in and electrical measurements Chart III with level B or C (as required)
- Lot acceptance testing Chart V if required

Components delivered through this specification need to be processed and inspected in accordance with the Microspire Process Identification Document (P.I.D.).

Each component delivered is traceable to its production lot.

The terminal material and finish shall be brass, plated with 2 to 4 μm of Nickel, the finish shall be either Sn60Pb40 or Sn90Pb10.

Cross reference chart

Microspire Non-QPL ID Code	ESA SCC Component Part Number
SESI 15 1K5 2WR	3201009 03 x 1L5 N
SESI 15 1K8 1WR	3201009 03 x 1L8 N
SESI 15 2K7 1WR	3201009 03 x 2L7 M
SESI 15 4K9 1WR	3201009 03 x 4L9 M
SESI 15 6K4 1WR	3201009 03 x 6L4 M
SESI 15 8K0 1WR	3201009 03 x 8L0 M
SESI 15 12K 1WR	3201009 03 x 120 M
SESI 15 16K 1WR	3201009 03 x 160 M
SESI 15 18K 1WR	3201009 03 x 180 M
SESI 15 21K 1WR	3201009 03 x 210 M
SESI 15 27K 1WR	3201009 03 x 270 M
SESI 15 33K 1WR	3201009 03 x 330 M
SESI 15 48K 1WR	3201009 03 x 480 K
SESI 15 56K 1WR	3201009 03 x 560 K
SESI 15 68K 1WR	3201009 03 x 680 K
SESI 15 82K 1WR	3201009 03 x 820 K
SESI 15 M10 1WR	3201009 03 x 101 K
SESI 15 M12 1WR	3201009 03 x 121 K
SESI 15 M15 1WR	3201009 03 x 151 K
SESI 15 M22 1WR	3201009 03 x 221 K
SESI 15 M33 1WR	3201009 03 x 331 K
SESI 15 1M0 1WR	3201009 03 x 102 K
SESI 15 2M3 1WR	3201009 03 x 232 K
3201009 03 x ### y	
x = B for Chart III level B	
x = C for Chart III level C	
Tolerance :	
y = N for $\pm 30\%$	
y = M for $\pm 20\%$	
y = K for $\pm 10\%$	

