

# SMD Power Inductors - SESI 32W/PR High Reliability Applications



- eesa ESCC 3201/009 version upon request
- Inductance values: 4.7  $\mu$ H to 4700  $\mu$ H
- Current up to 27 Arms and 38 A peak
- Through-hole design
- Materials meet UL94-V0 rating
- Suited for IR and vapor reflow soldering
- Frequency range up to 1 MHz
- Operating temperature range: -55  $^{\circ}$ C to +125  $^{\circ}$ C
- Weight: 56 grams
- Shielded version upon request

## Electrical Data (25 $^{\circ}$ C)

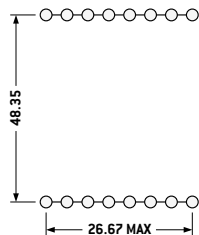
ID Code	L <sup>1</sup> no load $\mu$ H	I <sup>2.4</sup> rated A	L <sup>3</sup> at rated I $\mu$ H	I <sup>4.5</sup> peak max A	Rdc at 25 $^{\circ}$ C m $\Omega$ Max	Tol.
SESI 32 4K9 1#R	4.9	24.0	3.0	27.6	1.9	30
SESI 32 12K 1#R	12.1	15.5	7.3	17.8	4.4	
SESI 32 22K 1#R	22.5	11.5	13.5	13.2	7.8	
SESI 32 36K 1#R	36.1	9.2	21.75	10.6	13	20
SESI 32 53K 1#R	52.9	7.6	34.2	8.7	18	
SESI 32 73K 1#R	72.9	6.5	47.2	7.5	25	
SESI 32 84K 1#R	84.1	6.0	68.0	6.9	29	10
SESI 32 M11 1#R	109	5.3	88.0	6.1	38.5	
SESI 32 M15 1#R	152	4.5	123	5.2	54.5	
SESI 32 M20 1#R	202	3.9	163	4.5	70	
SESI 32 M26 1#R	260	3.4	210	3.9	89.5	
SESI 32 M35 1#R	348	3.0	281	3.4	117.5	
SESI 32 M45 1#R	476	2.5	385	2.9	160	
SESI 32 M62 1#R	624	2.2	505	2.5	221	
SESI 32 M83 1#R	828	1.9	670	2.2	254	
SESI 32 1M0 1#R	1020	1.7	826	2.0	353	
SESI 32 2M0 1#R	2045	1.2	1650	1.4	665	
SESI 32 4M7 1#R	4709	0.8	3760	0.92	1300	

## To Order

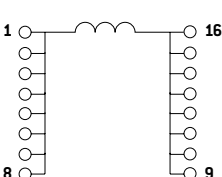
SESI	32	###	1	#	R
SMD Energy Storage Inductor	Size	Value code 35K = 35 $\mu$ H	Version	P : Pins through hole W : GW terminals	High reliability

SESI 32 ### 1#R

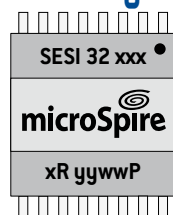
## PCB Layout (suggested)



## Connections



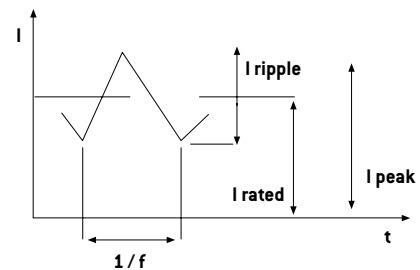
## Marking



yyww :  
Date code

## Notes

1. Inductance at 0.25 V, 100 kHz
2. I rated (permanent DC) without heatsink ; with heatsink I = I rated x 1.4
3. Typical inductance value at recommended full load
4. I peak max = maximum peak value of current at +85  $^{\circ}$ C; L value not guaranteed
5. 35 % admissible I ripple over I rated at f = 200 kHz
6. Isolation voltage 500 Vdc  
- 1 min - Ri > 1 G $\Omega$  between winding and magnetic core



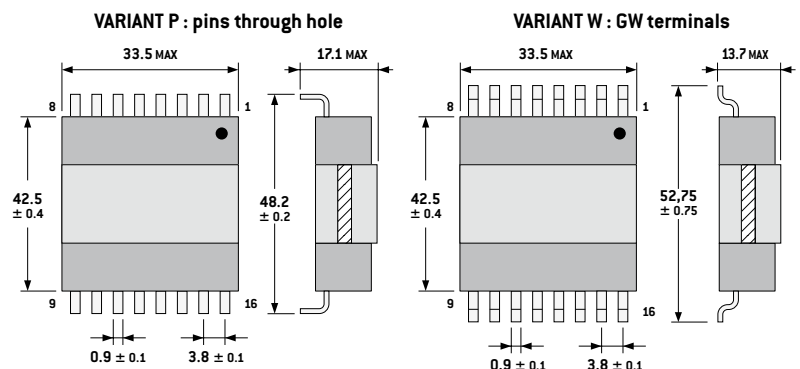
## Packaging

Individually packed 20 parts on 2 layers.

## Applications

Energy storage, smoothing, filtering.

## Dimensions (mm)



# SMD Power Inductors SESIxx

• esa QPL Components

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

Since January 2003, Microspire has been manufacturing Radio Frequency Fixed Coils, SESI 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 finish will be Sn60Pb40.

## Cross reference chart

Microspire Non-QPL ID Code	ESA SCC Component Part Number
SESI 9.1 1K0 1WR	3201009 05 x 1L0 N
SESI 9.1 1K5 1WR	3201009 05 x 1L5 N
SESI 9.1 2K0 2WR	3201009 05 x 2L0 N
SESI 9.1 2K6 2WR	3201009 05 x 2L6 M
SESI 9.1 3K4 2WR	3201009 05 x 3L4 M
SESI 9.1 4K3 2WR	3201009 05 x 4L3 M
SESI 9.1 6K2 2WR	3201009 05 x 6L2 M
SESI 9.1 8K5 2WR	3201009 05 x 8L5 M
SESI 9.1 10K 2WR	3201009 05 x 100 M
SESI 9.1 15K 2WR	3201009 05 x 150 M
SESI 9.1 18K 2WR	3201009 05 x 180 M
SESI 9.1 22K 2WR	3201009 05 x 220 M
SESI 9.1 26K 2WR	3201009 05 x 260 M
SESI 9.1 33K 2WR	3201009 05 x 330 K
SESI 9.1 47K 2WR	3201009 05 x 470 K
SESI 9.1 66K 2WR	3201009 05 x 660 K
SESI 9.1 81K 2WR	3201009 05 x 810 K
SESI 9.1 M10 2WR	3201009 05 x 101 K
SESI 9.1 M15 1WR	3201009 05 x 151 K
SESI 9.1 M22 1WR	3201009 05 x 221 K
SESI 9.1 M33 1WR	3201009 05 x 331 K
SESI 9.1 M47 1WR	3201009 05 x 471 K
SESI 9.1 M68 1WR	3201009 05 x 681 K
SESI 9.1 M10 1WR	3201009 05 x 102 K
<b>3201009 05 x ### y</b>	

x = B for Chart III level B  
x = C for Chart III level C

Tolerance :  
y = N for ±30%  
y = M for ±20%  
y = K for ±10%

## Cross reference chart

Microspire Non-QPL ID Code	ESA SCC Component Part Number
SESI 14 3K3 1SR	3201009 01 x 3L3 M
SESI 14 4K7 1SR	3201009 01 x 4L7 M
SESI 14 6K0 1SR	3201009 01 x 6L0 M
SESI 14 8K2 1SR	3201009 01 x 8L2 M
SESI 14 10K 1SR	3201009 01 x 100 M
SESI 14 15K 1SR	3201009 01 x 150 M
SESI 14 22K 1SR	3201009 01 x 220 M
SESI 14 33K 1SR	3201009 01 x 330 M
SESI 14 47K 1SR	3201009 01 x 470 K
SESI 14 56K 1SR	3201009 01 x 560 K
SESI 14 68K 1SR	3201009 01 x 680 K
SESI 14 82K 1SR	3201009 01 x 820 K
SESI 14 M10 1SR	3201009 01 x 101 K
SESI 14 M12 1SR	3201009 01 x 121 K
SESI 14 M15 1SR	3201009 01 x 151 K
SESI 14 M18 1SR	3201009 01 x 181 K
SESI 14 M22 1SR	3201009 01 x 221 K
SESI 14 M33 1SR	3201009 01 x 331 K
<b>3201009 01 x ### y</b>	

x = B for Chart III level B  
x = C for Chart III level C

Tolerance :  
y = M for ±20%  
y = K for ±10%



# SMD Power Inductors SESIxx

## QPL Components

### Cross reference chart

Microspire Non-QPL ID Code	ESA SCC Component Part Number
SESI 15 1K5 2SR	3201009 02 x 1L5 N
SESI 15 1K8 1SR	3201009 02 x 1L8 N
SESI 15 2K7 1SR	3201009 02 x 2L7 M
SESI 15 4K9 1SR	3201009 02 x 4L9 M
SESI 15 6K4 1SR	3201009 02 x 6L4 M
SESI 15 8K0 1SR	3201009 02 x 8L0 M
SESI 15 12K 1SR	3201009 02 x 120 M
SESI 15 16K 1SR	3201009 02 x 160 M
SESI 15 18K 1SR	3201009 02 x 180 M
SESI 15 21K 1SR	3201009 02 x 210 M
SESI 15 27K 1SR	3201009 02 x 270 M
SESI 15 33K 1SR	3201009 02 x 330 M
SESI 15 48K 1SR	3201009 02 x 480 K
SESI 15 56K 1SR	3201009 02 x 560 K
SESI 15 68K 1SR	3201009 02 x 680 K
SESI 15 82K 1SR	3201009 02 x 820 K
SESI 15 M10 1SR	3201009 02 x 101 K
SESI 15 M12 1SR	3201009 02 x 121 K
SESI 15 M15 1SR	3201009 02 x 151 K
SESI 15 M22 1SR	3201009 02 x 221 K
SESI 15 M33 1SR	3201009 02 x 331 K
SESI 15 1M0 1SR	3201009 02 x 102 K
SESI 15 2M3 1SR	3201009 02 x 232 K
<b>3201009 02 x### y</b>	
x = B for Chart III level B x = C for Chart III level C	Tolerance : y = N for ±30% y = M for ±20% y = K for ±10%

### 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
<b>3201009 03 x### y</b>	
x = B for Chart III level B x = C for Chart III level C	Tolerance : y = N for ±30% y = M for ±20% y = K for ±10%

### Cross reference chart

Microspire Non QPL ID Code	ESA SCC Component Part Number
SESI 18 6K8 1WR	3201009 04 x 6L8 M
SESI 18 8K2 1WR	3201009 04 x 8L2 M
SESI 18 11K 1WR	3201009 04 x 110 M
SESI 18 15K 1WR	3201009 04 x 150 M
SESI 18 18K 1WR	3201009 04 x 180 M
SESI 18 22K 1WR	3201009 04 x 220 M
SESI 18 27K 1WR	3201009 04 x 270 M
SESI 18 37K 1WR	3201009 04 x 370 K
SESI 18 49K 1WR	3201009 04 x 490 K
SESI 18 56K 1WR	3201009 04 x 560 K
SESI 18 70K 1WR	3201009 04 x 700 K
SESI 18 86K 1WR	3201009 04 x 860 K
SESI 18 M10 1WR	3201009 04 x 101 K
SESI 18 M12 1WR	3201009 04 x 121 K
SESI 18 M15 1WR	3201009 04 x 151 K
SESI 18 M18 1WR	3201009 04 x 181 K
SESI 18 M22 1WR	3201009 04 x 221 K
SESI 18 M33 1WR	3201009 04 x 331 K
<b>3201009 04 x### y</b>	
x = B for Chart III level B x = C for Chart III level C	Tolerance : y = M for ±20% y = K for ±10%



## Cross reference chart

Microspire Non-QPL ID Code	ESA SCC Component Part Number
SESI 22 7K0 2WR	3201009 06 x 7L0 M
SESI 22 7K7 2WR	3201009 06 x 7L7 M
SESI 22 10K 2WR	3201009 06 x 100 M
SESI 22 13K 2WR	3201009 06 x 130 M
SESI 22 19K 2WR	3201009 06 x 190 M
SESI 22 24K 2WR	3201009 06 x 240 M
SESI 22 33K 2WR	3201009 06 x 330 M
SESI 22 47K 1WR	3201009 06 x 470 K
SESI 22 64K 1WR	3201009 06 x 640 K
SESI 22 82K 1WR	3201009 06 x 820 K
SESI 22 M10 1WR	3201009 06 x 101 K
SESI 22 M15 1WR	3201009 06 x 151 K
SESI 22 M21 1WR	3201009 06 x 211 K
SESI 22 M34 1WR	3201009 06 x 341 K
SESI 22 M47 1WR	3201009 06 x 471 K
SESI 22 M68 1WR	3201009 06 x 681 K
SESI 22 M82 1WR	3201009 06 x 821 K
SESI 22 1M0 1WR	3201009 06 x 102 K
SESI 22 1M5 1WR	3201009 06 x 152 K
SESI 22 2M2 1WR	3201009 06 x 222 K
<b>3201009 06 x ### y</b>	
x = B for Chart III level B x = C for Chart III level C	Tolerance : y = M for ±20% y = K for ±10%

## Cross reference chart

Microspire Non-QPL ID Code	ESA SCC Component Part Number
SESI 32 4K9 1WR	3201009 07 x 4L9 N
SESI 32 12K 1WR	3201009 07 x 120 N
SESI 32 22K 1WR	3201009 07 x 220 N
SESI 32 36K 1WR	3201009 07 x 360 M
SESI 32 53K 1WR	3201009 07 x 530 M
SESI 32 73K 1WR	3201009 07 x 730 K
SESI 32 84K 1WR	3201009 07 x 840 K
SESI 32 M11 1WR	3201009 07 x 111 K
SESI 32 M15 1WR	3201009 07 x 151 K
SESI 32 M20 1WR	3201009 07 x 201 K
SESI 32 M26 1WR	3201009 07 x 261 K
SESI 32 M35 1WR	3201009 07 x 351 K
SESI 32 M45 1WR	3201009 07 x 451 K
SESI 32 M62 1WR	3201009 07 x 621 K
SESI 32 M83 1WR	3201009 07 x 831 K
SESI 32 1M0 1WR	3201009 07 x 102 K
SESI 32 2M0 1WR	3201009 07 x 202 K
SESI 32 4M7 1WR	3201009 07 x 472 K
<b>3201009 07 x ### y</b>	
x = B for Chart III level B x = C for Chart III level C	Tolerance : y = M for ±20% y = K for ±10% y = N for ±30%

## Cross reference chart

Microspire Non-QPL ID Code	ESA SCC Component Part Number
SESI 32 4K9 1PR	3201009 08 x 4L9 N
SESI 32 12K 1PR	3201009 08 x 120 N
SESI 32 22K 1PR	3201009 08 x 220 N
SESI 32 36K 1PR	3201009 08 x 360 M
SESI 32 53K 1PR	3201009 08 x 530 M
SESI 32 73K 1PR	3201009 08 x 730 K
SESI 32 84K 1PR	3201009 08 x 840 K
SESI 32 M11 1PR	3201009 08 x 111 K
SESI 32 M15 1PR	3201009 08 x 151 K
SESI 32 M20 1PR	3201009 08 x 201 K
SESI 32 M26 1PR	3201009 08 x 261 K
SESI 32 M35 1PR	3201009 08 x 351 K
SESI 32 M45 1PR	3201009 08 x 451 K
SESI 32 M62 1PR	3201009 08 x 621 K
SESI 32 M83 1PR	3201009 08 x 831 K
SESI 32 1M0 1PR	3201009 08 x 102 K
SESI 32 2M0 1PR	3201009 08 x 202 K
SESI 32 4M7 1PR	3201009 08 x 472 K
<b>3201009 07 x ### y</b>	
x = B for Chart III level B x = C for Chart III level C	Tolerance : y = M for ±20% y = K for ±10% y = N for ±30%

