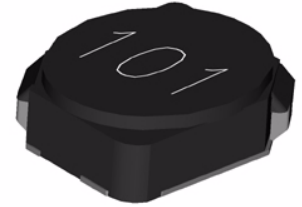


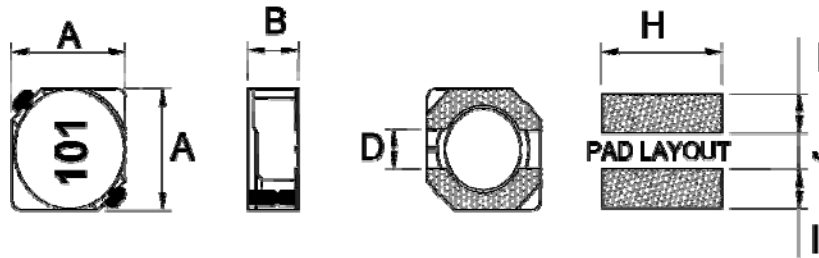
- Features:
- Provides magnetic shielding against radiation
  - Available on tape and reel for auto surface mounting
  - Contact factory for inductance values outside those listed in the datasheet
  - Find environmental information and packaging specification in related supplemental documents



- Applications:
- Power supply for VTRs
  - Notebook PCs
  - DC/DC converters
  - OA equipment
  - Portable communication devices

Inductance and Current Ranges		
Type	Inductance ( $\mu\text{H}$ )	Current Ranges (A)
SCDS3D18	1.5 ~ 220	1.55 ~ 0.13
SCDS4D18	1.0 ~ 180	1.72 ~ 0.14
SCDS4D22	1.5 ~ 150	2.00 ~ 0.21
SCDS4D28	1.2 ~ 180	2.56 ~ 0.22
SCDS5D18	4.1 ~ 470	1.95 ~ 0.18
SCDS5D28	2.2 ~ 100	2.60 ~ 0.42
SCDS6D28	1.0 ~ 330	6.15 ~ 0.35
SCDS6D38	3.3 ~ 330	3.50 ~ 0.39

How to Order												
1	2	3	4	5	6	7	8	9	10	11	12	13
S	C	D	S	3	D	1	8	N	T	1	0	1
Product Series		Dimensions		Tolerance		Packaging				Inductance		
SCDS	SMD Power Inductor	Code	Code	Tol	Code	Description	Size	Quantity	Code	Induct		
		3D18	M	20%	T	Tape and Reel	3D18, 4D18, 4D22, 4D28, 5D18, 5D28	2,000	1R1	1.1 $\mu\text{H}$		
		4D18	N	30%					470	47 $\mu\text{H}$		
		4D22							101	100 $\mu\text{H}$		
		4D28										
		5D18										
		5D28										
		6D28										
		6D38										



Mechanical Specifications							
Type / Code	A	B	D	H	I	J	Units
SCDS3D18	0.150 ± 0.012 3.8 ± 0.3	0.071 1.80	0.045 1.15	0.161 4.10	0.063 1.60	0.047 1.20	inches mm
SCDS4D18	0.185 ± 0.012 4.7 ± 0.3	0.079 2.00	0.059 1.50	0.209 5.30	0.069 1.75	0.059 1.50	inches mm
SCDS4D22	0.185 ± 0.012 4.7 ± 0.3	0.094 2.40	0.059 1.50	0.209 5.30	0.075 1.90	0.059 1.50	inches mm
SCDS4D28	0.185 ± 0.012 4.7 ± 0.3	0.118 3.00	0.059 1.50	0.209 5.30	0.075 1.90	0.059 1.50	inches mm
SCDS5D18	0.224 ± 0.012 5.7 ± 0.3	0.079 2.00	0.079 2.00	0.248 6.30	0.085 2.15	0.079 2.00	inches mm
SCDS5D28	0.224 ± 0.012 5.7 ± 0.3	0.118 3.00	0.079 2.00	0.248 6.30	0.085 2.15	0.079 2.00	inches mm
SCDS6D28	0.264 ± 0.012 6.7 ± 0.3	0.118 3.00	0.079 2.00	0.287 7.30	0.104 2.65	0.079 2.00	inches mm
SCDS6D38	0.264 ± 0.012 6.7 ± 0.3	0.157 4.00	0.079 2.00	0.287 7.30	0.104 2.65	0.079 2.00	inches mm

Electrical Specifications												
Codes	L (uH)	Tolerance	Test Condition		DCR ( $\Omega$ ) max.				IDC (A) max.			
			3D18 4D22 4D28	4D18	3D18	4D18	4D22	4D28	3D18	4D18	4D22	4D28
1R0	1.0	N	100KHz, 0.1V	7.96MHz, 0.1V	-	0.045	-	-	-	1.72	-	-
1R2	1.2	N	100KHz, 0.1V	7.96MHz, 0.1V	-	-	-	0.024	-	-	-	2.56
1R5	1.5	N	100KHz, 0.1V	7.96MHz, 0.1V	0.056	-	0.018	-	1.55	-	2.00	-
1R8	1.8	N	100KHz, 0.1V	7.96MHz, 0.1V	-	-	0.021	0.028	-	-	1.90	2.20
2R2	2.2	N	100KHz, 0.1V	7.96MHz, 0.1V	0.072	0.075	0.025	0.031	1.20	1.32	1.80	2.04
2R7	2.7	N	100KHz, 0.1V	7.96MHz, 0.1V	-	0.105	-	0.043	-	1.28	-	1.60
3R3	3.3	N	100KHz, 0.1V	7.96MHz, 0.1V	0.085	0.110	0.035	0.049	1.10	1.04	1.40	1.57
3R9	3.9	N	100KHz, 0.1V	7.96MHz, 0.1V	-	0.155	0.040	0.065	-	0.88	1.30	1.44
4R7	4.7	N	100KHz, 0.1V	7.96MHz, 0.1V	0.105	0.162	0.056	0.072	0.90	0.84	1.10	1.32
5R6	5.6	N	100KHz, 0.1V	7.96MHz, 0.1V	-	0.170	0.062	0.101	-	0.80	1.05	1.17
6R8	6.8	N	100KHz, 0.1V	7.96MHz, 0.1V	0.170	0.200	0.088	0.109	0.73	0.76	1.00	1.12
8R2	8.2	N	100KHz, 0.1V	7.96MHz, 0.1V	-	0.245	0.097	0.118	-	0.68	0.90	1.04
100	10	N	100KHz, 0.1V	100KHz, 0.1V	0.210	0.200	0.102	0.128	0.55	0.61	0.80	1.00
120	12	N	100KHz, 0.1V	100KHz, 0.1V	-	0.210	0.110	0.132	-	0.56	0.75	0.84
150	15	N	100KHz, 0.1V	100KHz, 0.1V	0.295	0.240	0.127	0.149	0.45	0.50	0.68	0.76
180	18	N	100KHz, 0.1V	100KHz, 0.1V	-	0.338	0.169	0.166	-	0.48	0.60	0.72
220	22	N	100KHz, 0.1V	100KHz, 0.1V	0.430	0.397	0.200	0.235	0.40	0.41	0.54	0.70
270	27	N	100KHz, 0.1V	100KHz, 0.1V	0.557	0.441	0.283	0.261	0.38	0.35	0.51	0.58
330	33	N	100KHz, 0.1V	100KHz, 0.1V	0.675	0.694	0.326	0.378	0.32	0.32	0.48	0.56
390	39	N	100KHz, 0.1V	100KHz, 0.1V	-	0.709	0.451	0.384	-	0.30	0.43	0.50
470	47	N	100KHz, 0.1V	100KHz, 0.1V	0.900	0.922	0.500	0.587	0.21	0.28	0.38	0.48
560	56	N	100KHz, 0.1V	100KHz, 0.1V	1.330	1.080	0.555	0.625	0.22	0.26	0.36	0.41
680	68	N	100KHz, 0.1V	100KHz, 0.1V	-	1.300	0.634	0.699	-	0.24	0.33	0.35
820	82	N	100KHz, 0.1V	100KHz, 0.1V	-	1.560	0.794	0.915	-	0.22	0.30	0.32
101	100	N	100KHz, 0.1V	100KHz, 0.1V	2.600	1.730	0.880	1.020	0.16	0.20	0.25	0.29
121	120	N	100KHz, 0.1V	100KHz, 0.1V	-	2.390	1.140	1.270	-	0.18	0.23	0.27
151	150	N	100KHz, 0.1V	100KHz, 0.1V	-	2.670	1.350	1.360	-	0.15	0.21	0.24
181	180	N	100KHz, 0.1V	100KHz, 0.1V	-	4.000	-	1.540	-	0.14	-	0.22
221	220	N	100KHz, 0.1V	100KHz, 0.1V	4.770	-	-	-	0.13	-	-	-

Electrical Specifications													
Codes	L (uH)	Tolerance		Test Condition	DCR ( $\Omega$ ) max.				IDC (A) max.				
		5D18 5D28 6D28	6D38		5D18	5D28	6D28	6D38	5D18	5D28	6D28	6D38	
1R0	1.0	N	-	10KHz, 0.1V	-	-	0.012	-	-	-	-	6.15	-
2R2	2.2	N	-	10KHz, 0.1V	-	0.018	0.018	-	-	-	2.60	4.80	-
2R6	2.6	N	-	10KHz, 0.1V	-	0.018	-	-	-	-	2.60	-	-
3R0	3.0	N	-	10KHz, 0.1V	-	0.024	0.024	-	-	-	2.40	3.00	-
3R3	3.3	N	M, N	10KHz, 0.1V	-	-	0.026	0.020	-	-	-	2.80	3.50
3R9	3.9	N	-	10KHz, 0.1V	-	-	0.027	-	-	-	-	2.60	-
4R1	4.1	N	-	10KHz, 0.1V	0.057	-	-	-	-	1.95	-	-	-
4R2	4.2	N	-	10KHz, 0.1V	-	0.031	-	-	-	-	2.20	-	-
4R7	4.7	N	-	10KHz, 0.1V	0.072	0.037	0.029	-	-	1.77	2.00	2.50	-
5R0	5.0	N	M, N	10KHz, 0.1V	-	-	0.031	0.024	-	-	-	2.40	2.90
5R3	5.3	N	-	10KHz, 0.1V	-	0.038	0.033	-	-	-	1.90	2.30	-
5R4	5.4	N	-	10KHz, 0.1V	0.076	-	-	-	-	1.60	-	-	-
5R6	5.6	N	-	10KHz, 0.1V	-	0.40	-	-	-	-	1.85	-	-
6R0	6.0	N	-	10KHz, 0.1V	-	-	0.035	-	-	-	-	2.25	-
6R2	6.2	N	M, N	10KHz, 0.1V	0.096	0.045	-	0.027	1.40	1.80	-	-	2.50
6R8	6.8	N	-	10KHz, 0.1V	0.110	0.050	0.052	-	-	1.30	1.82	2.20	-
7R3	7.3	N	-	10KHz, 0.1V	-	-	0.054	-	-	-	-	2.10	-
7R4	7.4	N	M, N	10KHz, 0.1V	-	-	-	0.031	-	-	-	-	2.30
8R2	8.2	N	-	10KHz, 0.1V	-	0.053	-	-	-	-	1.60	-	-
8R6	8.6	N	-	10KHz, 0.1V	-	-	0.058	-	-	-	-	1.85	-
8R7	8.7	N	M, N	10KHz, 0.1V	-	-	-	0.034	-	-	-	-	2.20
8R9	8.9	N	-	10KHz, 0.1V	0.116	-	-	-	-	1.25	-	-	-
100	10	N	M, N	10KHz, 0.1V	0.124	0.065	0.065	0.038	1.20	1.30	1.70	2.00	-
120	12	N	M, N	10KHz, 0.1V	0.153	0.076	0.070	0.053	1.10	1.20	1.55	1.70	-
150	15	N	M, N	10KHz, 0.1V	0.196	0.103	0.084	0.057	0.97	1.10	1.40	1.60	-
180	18	N	M, N	10KHz, 0.1V	0.210	0.110	0.095	0.092	0.85	1.00	1.32	1.50	-
220	22	N	M, N	10KHz, 0.1V	0.290	0.122	0.128	0.096	0.80	0.90	1.20	1.30	-
270	27	N	M, N	10KHz, 0.1V	0.330	0.175	0.142	0.109	0.75	0.85	1.05	1.20	-
330	33	N	M, N	10KHz, 0.1V	0.386	0.189	0.165	0.124	0.65	0.75	0.97	1.10	-
390	39	N	M, N	10KHz, 0.1V	0.520	0.212	0.210	0.138	0.57	0.70	0.86	1.00	-
470	47	N	M, N	10KHz, 0.1V	0.595	0.260	0.238	0.155	0.54	0.62	0.80	0.95	-
560	56	N	M, N	10KHz, 0.1V	0.665	0.305	0.277	0.202	0.50	0.58	0.73	0.85	-
680	68	N	M, N	10KHz, 0.1V	0.840	0.355	0.304	0.234	0.43	0.52	0.65	0.75	-
820	82	N	M, N	10KHz, 0.1V	0.978	0.463	0.390	0.324	0.41	0.46	0.60	0.70	-
101	100	N	M, N	10KHz, 0.1V	1.200	0.520	0.535	0.368	0.36	0.42	0.54	0.65	-
151	150	N	-	10KHz, 0.1V	2.000	-	-	-	0.25	-	-	-	-
221	220	N	-	10KHz, 0.1V	3.280	-	1.350	-	0.20	-	0.45	-	-
331	330	N	M, N	10KHz, 0.1V	-	-	2.000	1.250	-	-	0.35	0.39	-
471	470	N	-	10KHz, 0.1V	6.560	-	-	-	0.18	-	-	-	-

Performance Characteristics		
Item	Specification	Test Conditions / Test Methods
Shelf storage conditions	Temperature range: 25±3°C; Humidity < 80% relative humidity	
	Recommended product should be used within six months from the time of delivery	
Storage temperature range	Temperature range: -40°C to +85°C	
High temperature storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature 85±2°C Time: 48±2 hours Tested after 1 hour at room temperature
Low temperature storage test		Temperature -25±2°C Time: 48±2 hours Tested after 1 hour at room temperature
Humidity test		Temperature 40±2°C, 90~95% relative humidity Time: 96±2 hours, apply rated current Tested after 1 hour at room temperature
Thermal shock test		First -25°C 30 minutes then 25°C 10 minutes, 85°C 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature
Solderability test	Terminal area must have 90% minimum solder coverage	Dip pads in flux then dip in solder pot (SnCuNi) at 245±5°C for 3 seconds
Heat endurance of reflow soldering	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Refer to the reflow soldering condition. Go through 3 times.
Vibration test		Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours
Shock resistance		Drop down with 981m/s <sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of the three orientations.