Chilisin Electronics Singapore Pte Ltd

SMD Power Inductor, SCD Series

Feature:

- Compact in Size, High mounting Density
- Large Permissible DC Current and Low DC Resistance
- Automatic Pick and Place machine is applicable
- Reflow soldering is applicable

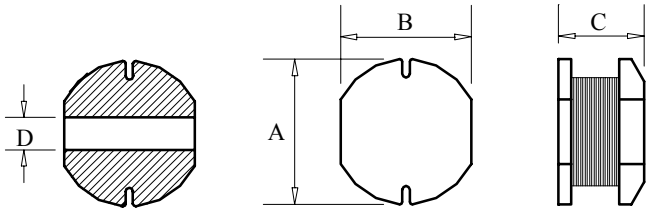
Ordering Code:

SCD - 0403 - 3R3 - □

Type → Size

Tolerance → Inductance

Dimension in mm:



Type	A	B	C	D typ.
SCD - 0403 - □□□	4.5 ± 0.3	4.0 ± 0.3	3.2 ± 0.3	1.2
SCD - 0504 - □□□	5.8 ± 0.3	5.2 ± 0.3	4.5 ± 0.4	1.3
SCD - 0703 - □□□	7.8 ± 0.3	7.0 ± 0.3	3.5 ± 0.5	2.1
SCD - 0705 - □□□	7.8 ± 0.3	7.0 ± 0.3	5.0 ± 0.5	2.1
SCD - 1004 - □□□	10.0 ± 0.3	9.0 ± 0.3	4.0 ± 0.5	2.1
SCD - 1005 - □□□	10.0 ± 0.4	9.0 ± 0.3	5.4 ± 0.4	2.1
SCD - 1006 - □□□	11.0 Max	10.0 Max	7.5 Max	2.1

Electrical:

Type	Inductance	DCR (ohm)	Rated Current (A)
SCD - 0403 - □□□	1.0μH ~ 68μH	0.049Ω ~ 1.117Ω	2.56A ~ 0.37A
SCD - 0504 - □□□	10μH ~ 220μH	0.10Ω ~ 1.57Ω	1.44A ~ 0.35A
SCD - 0703 - □□□	10μH ~ 330μH	0.08Ω ~ 1.50Ω	1.44A ~ 0.28A
SCD - 0705 - □□□	10μH ~ 470μH	0.07Ω ~ 1.96Ω	2.30A ~ 0.34A
SCD - 1004 - □□□	10μH ~ 47μH	0.05Ω ~ 1.90Ω	2.38A ~ 0.32A
SCD - 1005 - □□□	10μH ~ 820μH	0.06Ω ~ 2.55Ω	2.60A ~ 0.24A
SCD - 1006 - □□□	10μH ~ 1200μH	0.06Ω ~ 3.50Ω	3.50A ~ 0.35A

Next **Back**

ELECTRICAL CHARACTERISTICS

Part no.	Inductance(μH)	Test Freq.	DCR (Ω)	Rated (A) Max
SCD-0403-1R0M	1.0	7.96MHz	0.049	2.56
SCD-0403-1R4M	1.4	7.96MHz	0.057	2.52
SCD-0403-1R8M	1.8	7.96MHz	0.064	1.95
SCD-0403-2R2M	2.2	7.96MHz	0.072	1.75
SCD-0403-2R7M	2.7	7.96MHz	0.079	1.58
SCD-0403-3R3M	3.3	7.96MHz	0.087	1.44
SCD-0403-3R9M	3.9	7.96MHz	0.094	1.33
SCD-0403-4R7M	4.7	7.96MHz	0.109	1.15
SCD-0403-5R6M	5.6	7.96MHz	0.126	1.10
SCD-0403-6R8M	6.8	7.96MHz	0.132	1.08
SCD-0403-8R2M	8.2	7.96MHz	0.147	1.05
SCD-0403-100M	10	2.52MHz	0.182	1.04
SCD-0403-120M	12	2.52MHz	0.210	0.97
SCD-0403-150M	15	2.52MHz	0.235	0.85
SCD-0403-180M	18	2.52MHz	0.338	0.74
SCD-0403-220M	22	2.52MHz	0.378	0.68
SCD-0403-270M	27	2.52MHz	0.522	0.62
SCD-0403-330K	33	2.52MHz	0.540	0.56
SCD-0403-390K	39	2.52MHz	0.587	0.52
SCD-0403-470K	47	2.52MHz	0.844	0.44
SCD-0403-560K	56	2.52MHz	0.937	.42
SCD-0403-680K	68	2.52MHz	1.117	0.37

K = ±10% Tolerance
L = ±15% Tolerance
M = ±20% Tolerance

Next

Back

ELECTRICAL CHARACTERISTICS

Part no.	Inductance(μH)	Test Freq.	DCR (Ω)	Rated (A) Max
SCD-0504-100M	10	2.52MHz	0.10	1.44
SCD-0504-120M	12	2.52MHz	0.12	1.40
SCD-0504-150M	15	2.52MHz	0.14	1.30
SCD-0504-180M	18	2.52MHz	0.15	1.23
SCD-0504-220M	22	2.52MHz	0.18	1.11
SCD-0504-270M	27	2.52MHz	0.20	0.97
SCD-0504-330L	33	2.52MHz	0.23	0.88
SCD-0504-390L	39	2.52MHz	0.32	0.80
SCD-0504-470L	47	2.52MHz	0.37	0.72
SCD-0504-560K	56	2.52MHz	0.42	0.68
SCD-0504-680K	68	2.52MHz	0.46	0.61
SCD-0504-820K	82	2.52MHz	0.60	0.58
SCD-0504-101K	100	1KHz	0.70	0.52
SCD-0504-121K	120	1KHz	0.93	0.48
SCD-0504-151K	150	1KHz	1.10	0.40
SCD-0504-181K	180	1KHz	1.38	0.38
SCD-0504-221K	220	1KHz	1.57	0.35

K = ±10% Tolerance
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Next Back

ELECTRICAL CHARACTERISTICS

Part no.	Inductance(μH)	Test Freq.	DCR (Ω)	Rated (A) Max
SCD-0703-100M	10	2.52MHz	0.08	1.44
SCD-0703-120M	12	2.52MHz	0.09	1.39
SCD-0703-150M	15	2.52MHz	0.10	1.24
SCD-0703-180M	18	2.52MHz	0.11	1.12
SCD-0703-220M	22	2.52MHz	0.13	1.07
SCD-0703-270M	27	2.52MHz	0.15	0.94
SCD-0703-330M	33	2.52MHz	0.17	0.85
SCD-0703-390M	39	2.52MHz	0.22	0.74
SCD-0703-470M	47	2.52MHz	0.25	0.68
SCD-0703-560K	56	2.52MHz	0.28	0.64
SCD-0703-680K	68	2.52MHz	0.33	0.59
SCD-0703-820K	82	2.52MHz	0.41	0.54
SCD-0703-101K	100	1KHz	0.48	0.51
SCD-0703-121K	120	1KHz	0.54	0.49
SCD-0703-151K	150	1KHz	0.75	0.40
SCD-0703-181K	180	1KHz	1.02	0.36
SCD-0703-221K	220	1KHz	1.20	0.31
SCD-0703-271K	270	1KHz	1.31	0.29
SCD-0703-331K	330	1KHz	1.50	0.28

K = ±10% Tolerance
L = ±15% Tolerance
M = ±20% Tolerance

Next

Back

ELECTRICAL CHARACTERISTICS

Part no.	Inductance(μH)	Test Freq.	DCR (Ω)	Rated (A) Max
SCD-0705-100K	10	2.52MHz	0.07	2.30
SCD-0705-120K	12	2.52MHz	0.08	2.00
SCD-0705-150K	15	2.52MHz	0.09	1.80
SCD-0705-180K	18	2.52MHz	0.10	1.60
SCD-0705-220K	22	2.52MHz	0.11	1.50
SCD-0705-270K	27	2.52MHz	0.12	1.30
SCD-0705-330K	33	2.52MHz	0.13	1.20
SCD-0705-390K	39	2.52MHz	0.16	1.10
SCD-0705-470K	47	2.52MHz	0.18	1.10
SCD-0705-560K	56	2.52MHz	0.24	0.94
SCD-0705-680K	68	2.52MHz	0.28	0.85
SCD-0705-820K	82	2.52MHz	0.37	0.78
SCD-0705-101K	100	1KHz	0.43	0.72
SCD-0705-121K	120	1KHz	0.47	0.66
SCD-0705-151K	150	1KHz	0.64	0.58
SCD-0705-181K	180	1KHz	0.71	0.51
SCD-0705-221K	220	1KHz	0.96	0.49
SCD-0705-271K	270	1KHz	1.11	0.42
SCD-0705-331K	330	1KHz	1.26	0.40
SCD-0705-391K	390	1KHz	1.77	0.36
SCD-0705-471K	470	1KHz	1.96	0.34

K = ±10% Tolerance
L = ±15% Tolerance
M = ±20% Tolerance

Next

Back

ELECTRICAL CHARACTERISTICS

Part no.	Inductance(μH)	Test Freq.	DCR (Ω)	Rated (A) Max
SCD-1004-100M	10	2.52MHz	0.05	2.38
SCD-1004-120M	12	2.52MHz	0.06	2.13
SCD-1004-150M	15	2.52MHz	0.07	1.87
SCD-1004-180M	18	2.52MHz	0.08	1.73
SCD-1004-220M	22	2.52MHz	0.09	1.60
SCD-1004-270M	27	2.52MHz	0.10	1.44
SCD-1004-330M	33	2.52MHz	0.12	1.26
SCD-1004-390M	39	2.52MHz	0.15	1.20
SCD-1004-470M	47	2.52MHz	0.17	1.10
SCD-1004-560K	56	2.52MHz	0.20	1.01
SCD-1004-680K	68	2.52MHz	0.22	0.91
SCD-1004-820K	82	2.52MHz	0.25	0.85
SCD-1004-101K	100	1KHz	0.34	0.74
SCD-1004-121K	120	1KHz	0.40	0.69
SCD-1004-151K	150	1KHz	0.54	0.61
SCD-1004-181K	180	1KHz	0.62	0.56
SCD-1004-221K	220	1KHz	0.72	0.53
SCD-1004-271K	270	1KHz	0.95	0.45
SCD-1004-331K	330	1KHz	1.10	0.42
SCD-1004-391K	390	1KHz	1.24	0.38
SCD-1004-471K	470	1KHz	1.53	0.35
SCD-1004-561K	560	1KHz	1.90	0.32

K = ±10% Tolerance
L = ±15% Tolerance
M = ±20% Tolerance

Next

Back

ELECTRICAL CHARACTERISTICS

Part no.	Inductance(μH)	Test Freq.	DCR (Ω)	Rated (A) Max
SCD-1005-100M	10	2.52MHz	0.06	2.60
SCD-1005-120M	12	2.52MHz	0.07	2.45
SCD-1005-150M	15	2.52MHz	0.08	2.27
SCD-1005-180M	18	2.52MHz	0.09	2.15
SCD-1005-220M	22	2.52MHz	0.10	1.95
SCD-1005-270M	27	2.52MHz	0.11	1.76
SCD-1005-330M	33	2.52MHz	0.12	1.50
SCD-1005-390M	39	2.52MHz	0.14	1.37
SCD-1005-470K	47	2.52MHz	0.17	1.28
SCD-1005-560K	56	2.52MHz	0.19	1.17
SCD-1005-680K	68	2.52MHz	0.22	1.11
SCD-1005-820K	82	2.52MHz	0.25	1.00
SCD-1005-101K	100	1KHz	0.35	0.97
SCD-1005-121K	120	1KHz	0.40	0.89
SCD-1005-151K	150	1KHz	0.47	0.78
SCD-1005-181K	180	1KHz	0.63	0.72
SCD-1005-221K	220	1KHz	0.73	0.66
SCD-1005-271K	270	1KHz	0.97	0.57
SCD-1005-331K	330	1KHz	1.15	0.52
SCD-1005-391K	390	1KHz	1.30	0.48
SCD-1005-471K	470	1KHz	1.48	0.42
SCD-1005-561K	560	1KHz	1.90	0.33
SCD-1005-681K	680	1KHz	2.25	0.28
SCD-1005-821K	820	1KHz	2.55	0.24

K = ±10% Tolerance
L = ±15% Tolerance
M = ±20% Tolerance

Next

Back

Chilisin Electronics Singapore Pte Ltd

SMD Power Inductor, SCD Series **SCD-1006 Type**

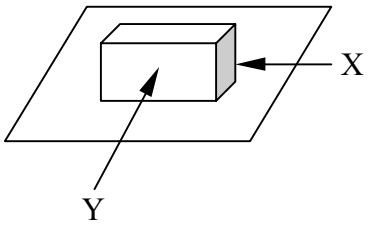
ELECTRICAL CHARACTERISTICS

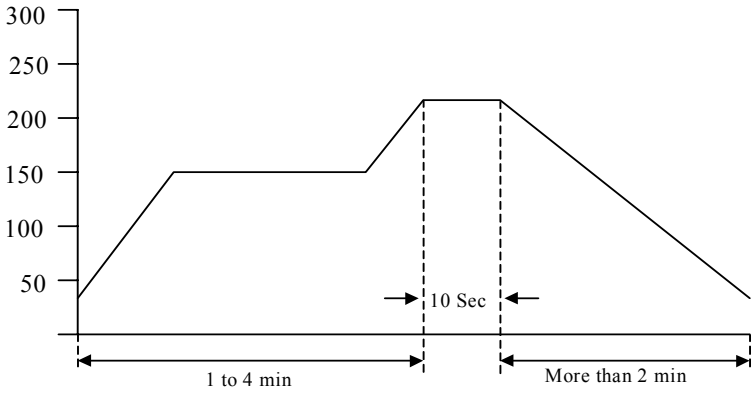
Part no.	Inductance(μH)	Test Freq.	DCR (Ω)	Rated (A) Max
SCD-1006-100M	10	1KHz	0.06	3.50
SCD-1006-120M	12	1KHz	0.07	3.40
SCD-1006-150M	15	1KHz	0.08	3.10
SCD-1006-180M	18	1KHz	0.09	3.00
SCD-1006-220M	22	1KHz	0.10	2.60
SCD-1006-270M	27	1KHz	0.11	2.40
SCD-1006-330M	33	1KHz	0.12	2.30
SCD-1006-390M	39	1KHz	0.14	2.10
SCD-1006-470M	47	1KHz	0.17	1.95
SCD-1006-560M	56	1KHz	0.19	1.85
SCD-1006-680M	68	1KHz	0.22	1.65
SCD-1006-820M	82	1KHz	0.25	1.50
SCD-1006-101K	100	1KHz	0.36	1.40
SCD-1006-121K	120	1KHz	0.40	1.30
SCD-1006-151K	150	1KHz	0.47	1.20
SCD-1006-181K	180	1KHz	0.63	1.00
SCD-1006-221K	220	1KHz	0.73	0.95
SCD-1006-271K	270	1KHz	0.97	0.90
SCD-1006-331K	330	1KHz	1.15	0.80
SCD-1006-391K	390	1KHz	1.30	0.75
SCD-1006-471K	470	1KHz	1.48	0.65
SCD-1006-561K	560	1KHz	1.90	0.60
SCD-1006-681K	680	1KHz	2.45	0.50
SCD-1006-821K	820	1KHz	2.55	0.48
SCD-1006-102K	1000	1KHz	3.00	0.46
SCD-1006-122K	1200	1KHz	3.50	0.35

K = ±10% Tolerance
L = ±15% Tolerance
M = ±20% Tolerance

Next Back

Component Specification for SCD Power Inductors

Operating Temperature	-30°C to +85°C
Appearance Inspection	No external defects by visual inspection
Terminal Strength	After soldering between copper plate and terminals of coil, Push in two directions of X and Y. (refer to figure below) Withstanding the below conditions. 10.0N 10 sec. SCD0403 SCD0504 15.0N 10 sec. SCD0703 SCD0705 20.0N 10 sec. SCD1004 SCD1005 SCD1006 Terminal should not peel off. 
Heat endurance IR re-flow	Refer to below Graph
Insulating resistance	Over 100MΩ at 100v DC for 1 minute between wire and core
Temperature characteristics	Inductance Coefficient (0 ~ 2,000) X 10^{-6} / °C (-25°C ~ +80°C)
Humidity Characteristics	Inductance deviation within ±5% after 96 hours in 90% ~ 95% Relative humidity at 40% ± 2°C and 1 hour drying under normal condition
Vibration Resistance	Inductance deviation within ±50%, after vibration for 1 hour in each of the three orientations at sweep vibration (10Hz ~ 55Hz ~ 10Hz) With 1.5mm p-p ampitude

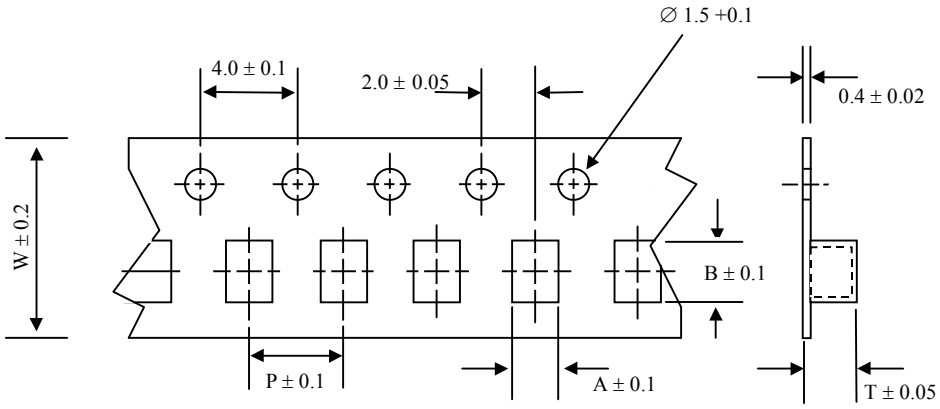


Next

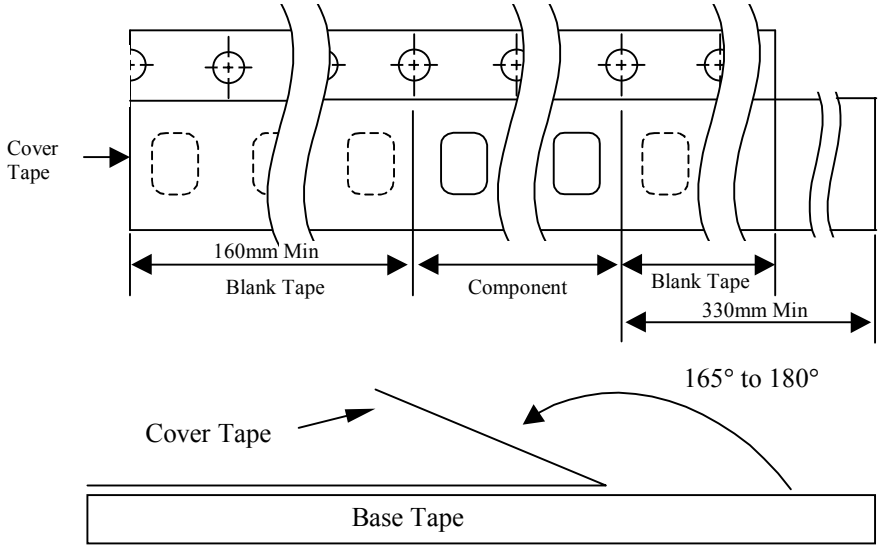
Back

Component Specification for SCD Power Inductors

Tape Dimensions in mm:



Type	A	B	W	P	T	Qty/Reel
SCD 0403	4.3	4.8	12	8	3.70	1500
SCD 0504	5.6	6.2	12	12	5.00	1000
SCD 0703	7.5	8.3	16	12	4.00	1000
SCD 0705	7.5	8.3	16	12	5.70	500
SCD 1004	9.6	10.5	24	12	4.70	1000
SCD 1005	9.6	10.5	24	16	6.00	500
SCD 1006	9.6	10.5	24	16	7.20	500



Next

Back