

SURFACE MOUNTING RF AIR CORE INDUCTORS



Features :

- Inductance values from 27 nH up to 500 nH.
- Excellent Q factors – up to 230 at 400 MHz.
- Current handling as high as 5.7 Amps.
- Flat top for reliable pick and place and mechanical stability.
- All % values available in 2%,5% tolerance.
- Ag-solder coated leads ensure reliable soldering.



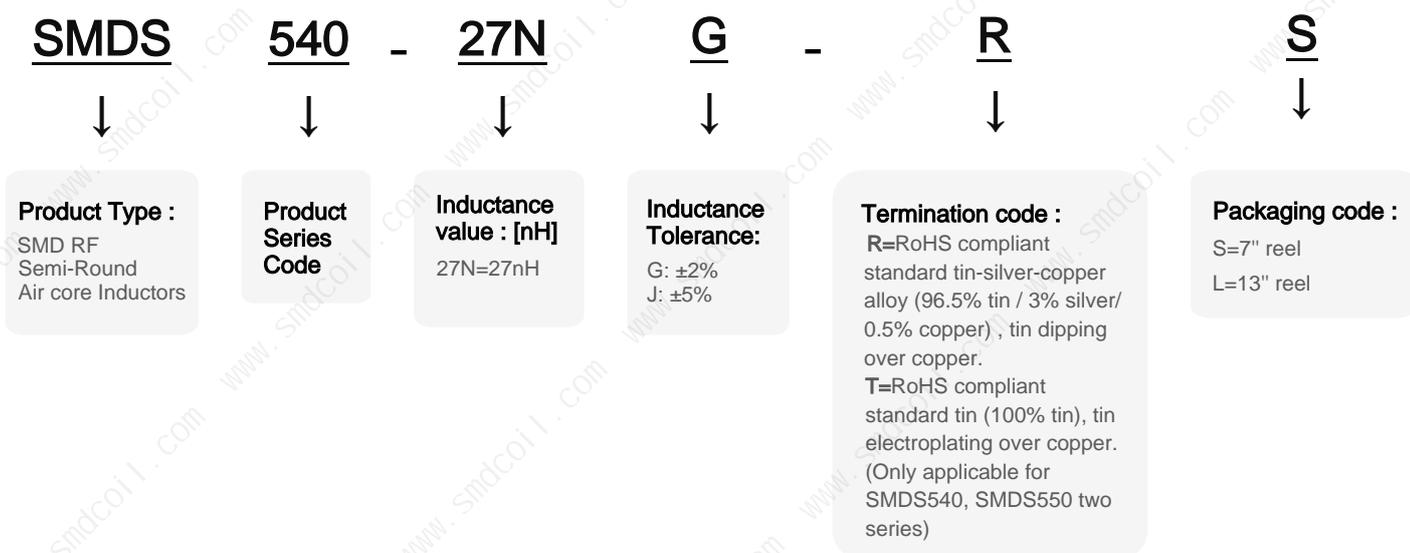
Applications :

- Especially for RF applications.
- Ideal for high current applications.
- Broad band filter.
- RF-Decoupling.

Environmental Data :

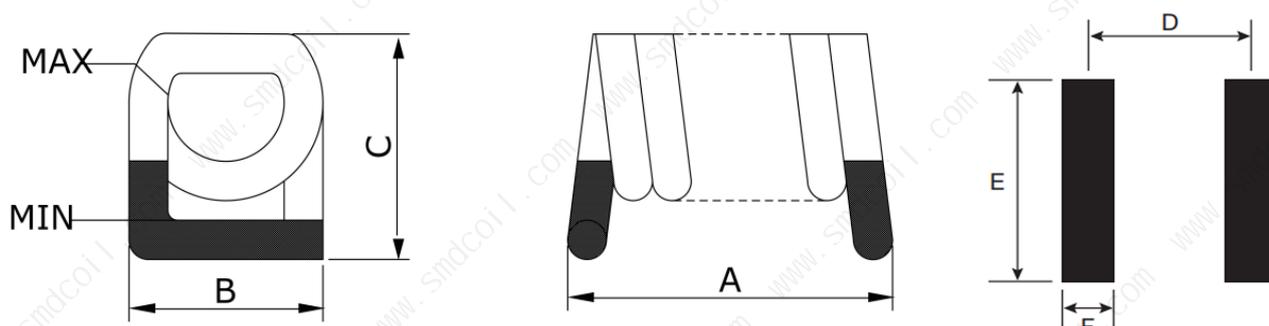
- Operating temperature : – 40°C~+125°C, (Including coil's self temperature rise).
- Ambient temperature : – 40°C~+125°C. (referring to Irms) .
- Storage temperature(on tape & reel packing) : – 40°C~+80°C; 75% RH max.
- Full RoHS compliance.

▶ PRODUCT IDENTIFICATION :



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► DIMENSIONS & RECOMMENDED LAND PATTERN : [MM]



Part number	A	B	C	D	E	F	Weight (mg)
SMDS540-27N	2.67±0.254	2.67±0.381	2.79±0.127	2.29	3.05	1.02	35
SMDS540-30N	2.67±0.254	2.67±0.381	2.79±0.127	2.29	3.05	1.02	36
SMDS540-33N	2.92±0.254	2.67±0.381	2.79±0.127	2.54	3.05	1.02	42
SMDS540-36N	2.92±0.254	2.67±0.381	2.79±0.127	2.54	3.05	1.02	43
SMDS540-39N	2.92±0.254	2.67±0.381	2.79±0.127	2.54	3.05	1.02	45
SMDS540-43N	3.30±0.254	2.67±0.381	2.79±0.127	2.79	3.05	1.02	46
SMDS540-47N	3.30±0.254	2.67±0.381	2.79±0.127	2.79	3.05	1.02	50
SMDS550-47N	4.06±0.254	3.56±0.178	3.73±0.178	3.56	4.45	1.78	110
SMDS550-68N	5.33±0.254	3.56±0.178	3.73±0.178	4.83	4.45	1.78	143
SMDS550-82N	5.84±0.254	3.56±0.178	3.73±0.178	5.33	4.45	1.78	165
SMDS570-90N	5.21±0.381	5.46±0.254	5.69±0.254	4.45	6.48	2.16	280
SMDS570-110	6.35±0.381	5.59±0.254	5.69±0.254	5.84	6.73	2.16	330
SMDS570-130	6.73±0.381	5.59±0.254	5.69±0.254	6.22	6.73	2.16	365
SMDS570-160	7.73±0.381	5.59±0.254	5.69±0.254	6.60	6.73	2.16	425
SMDS570-180	8.13±0.381	5.59±0.254	5.69±0.254	7.37	6.73	2.16	455
SMDS570-220	9.91±0.381	5.59±0.254	5.69±0.254	9.14	6.73	2.16	550
SMDS570-270	11.68±0.381	5.59±0.254	5.69±0.254	10.67	6.73	2.16	640
SMDS570-300	11.94±0.381	5.72±0.254	5.69±0.254	11.18	6.73	2.16	680
SMDS580-330	10.29±0.381	7.49±0.254	7.24±0.254	9.35	8.26	2.29	865
SMDS580-360	11.30±0.381	7.49±0.254	7.24±0.254	10.54	8.26	2.29	930
SMDS580-390	12.32±0.381	7.49±0.254	7.24±0.254	11.56	8.26	2.29	990
SMDS580-430	13.21±0.381	7.49±0.254	7.24±0.254	12.45	8.26	2.29	1070
SMDS580-500	14.00±0.381	7.49±0.254	7.24±0.254	13.21	8.26	2.29	1160

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► ELECTRICAL SPECIFICATION :

Part number	Inductance (nH)	Percent tolerance	Q typ	Test frequency (MHz)	SRF min GHz	DC Resistance (m) max	Irms (A)
SMDS540-27N	27	5 , 2	200	400	2.60	8.1	5.5
SMDS540-30N	30	5 , 2	200	400	2.40	8.3	5.5
SMDS540-33N	33	5 , 2	200	400	2.30	9.5	4.8
SMDS540-36N	36	5 , 2	200	400	2.30	9.8	4.8
SMDS540-39N	39	5 , 2	200	400	2.20	10.0	4.8
SMDS540-43N	43	5 , 2	200	400	2.20	10.8	4.4
SMDS540-47N	47	5 , 2	200	400	2.20	11.3	4.4
SMDS550-47N	47	5 , 2	230	400	1.87	6.35	4.9
SMDS550-68N	68	5 , 2	230	400	2.13	8.60	5.5
SMDS550-82N	82	5 , 2	230	400	1.79	9.40	5.6
SMDS570-90N	90	5 , 2	140	50	1.15	5.50	5.0
SMDS570-110	110	5 , 2	140	50	1.00	6.50	5.7
SMDS570-130	130	5 , 2	140	50	1.00	7.50	5.4
SMDS570-160	160	5 , 2	140	50	1.00	8.25	5.7
SMDS570-180	180	5 , 2	140	50	1.10	9.50	5.0
SMDS570-220	220	5 , 2	140	50	1.00	11.0	5.0
SMDS570-270	270	5 , 2	140	50	0.80	12.5	4.3
SMDS570-300	300	5 , 2	140	50	0.72	13.8	3.7
SMDS580-330	330	5 , 2	180	50	0.66	12.5	4.7
SMDS580-360	360	5 , 2	180	50	0.62	13.5	4.5
SMDS580-390	390	5 , 2	180	50	0.59	14.5	4.4
SMDS580-430	430	5 , 2	180	50	0.55	15.5	4.2
SMDS580-500	500	5 , 2	180	50	0.50	16.5	4.3

* Custom designs are available upon requested.

Note :

1. Inductance measured at 50MHz&400MHz, 0.1Vrms, 0 A using HP4287A LCR meter or equivalent with 16193A test fixture.
2. Q measured at 400MHz, using HP4291B LCR meter or equivalent.
3. SRF measured using HP8753 network analyzer and SMD test fixture.
4. Electrical specification at 25°C ambient.
5. Resistance to soldering heat : Max three 40s reflows at 260°C, parts cooled to room temperature between cycles.
6. Moisture Sensitivity Level (MSL) 1

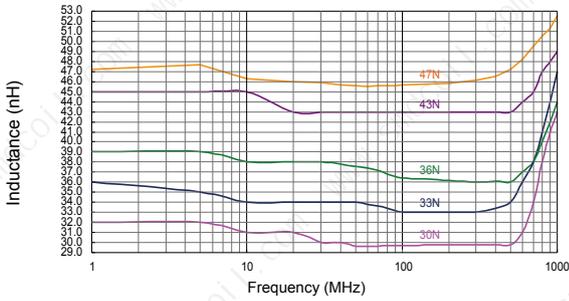
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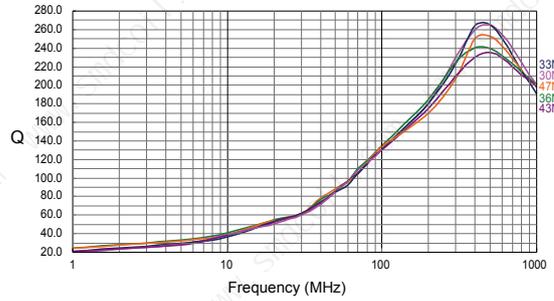
► ELECTRICAL CHARACTERISTIC CURVE :

SMDS540

Inductance vs. Frequency

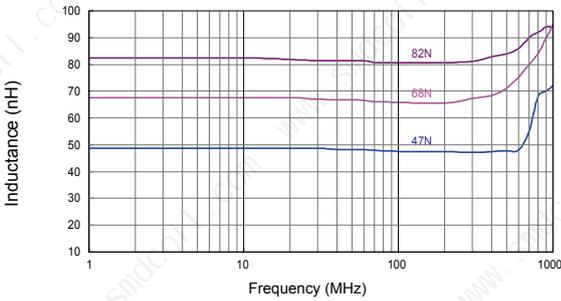


Typical Q vs. Frequency

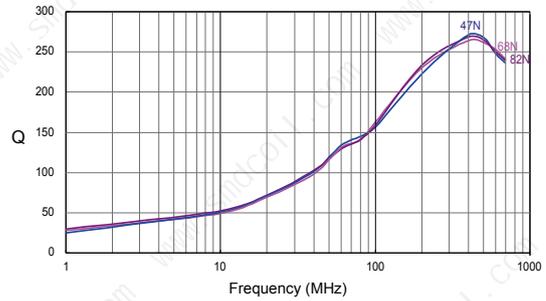


SMDS550

Inductance vs. Frequency

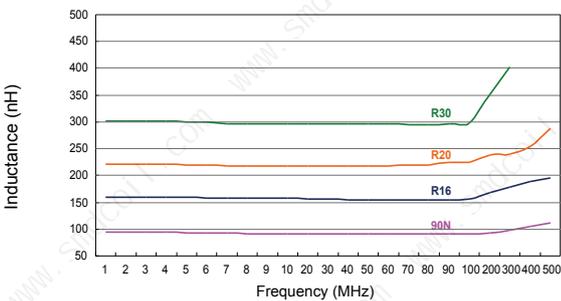


Typical Q vs. Frequency

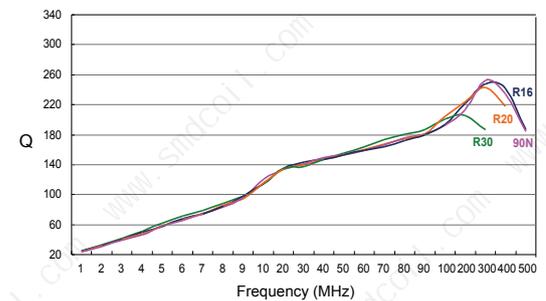


SMDS570

Inductance vs. Frequency

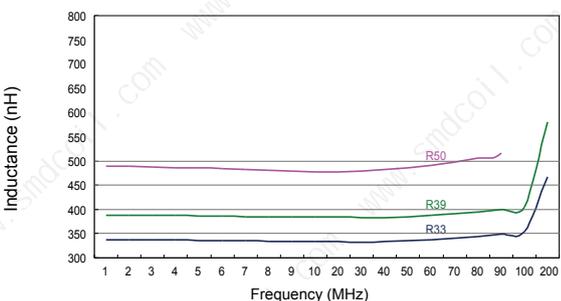


Typical Q vs. Frequency

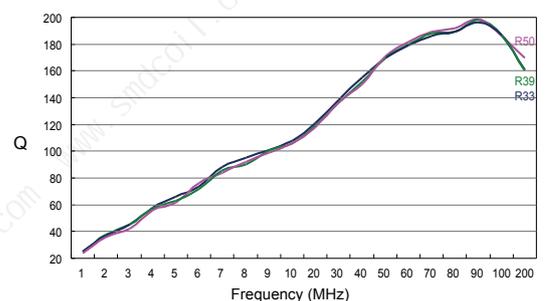


SMDS580

Inductance vs. Frequency



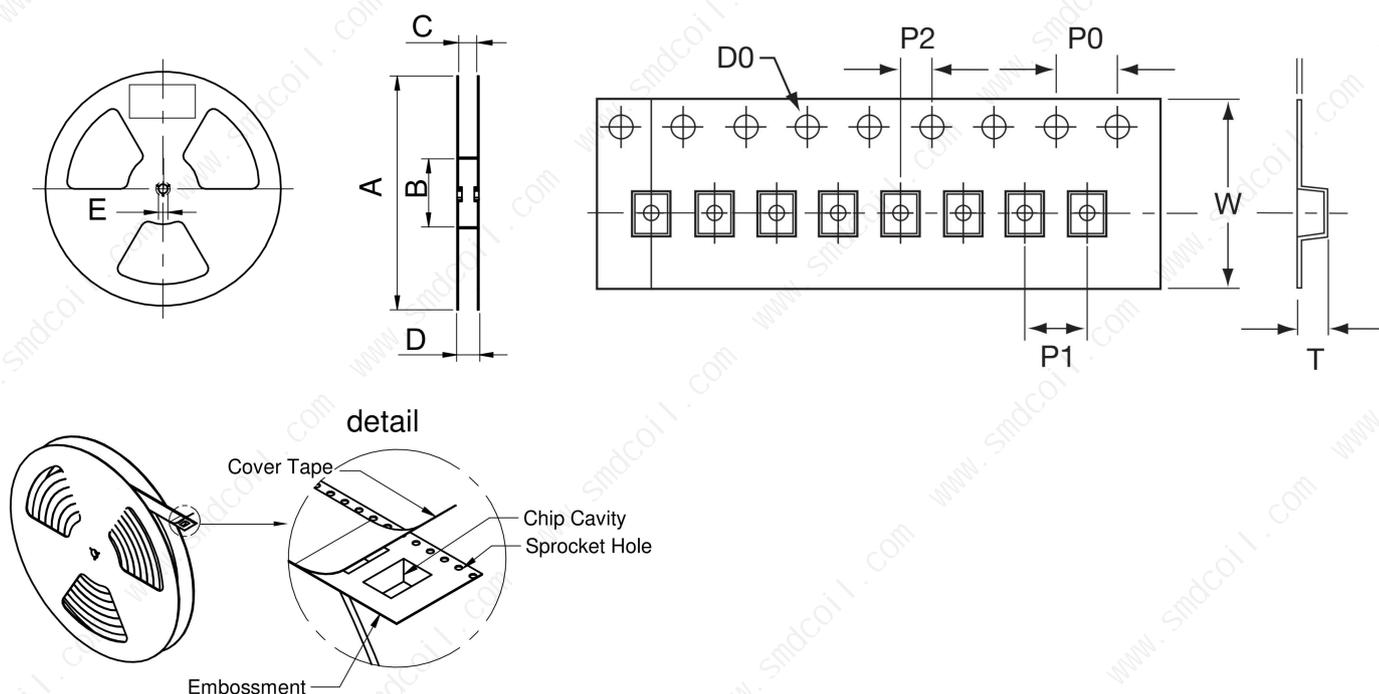
Typical Q vs. Frequency



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► PACKAGING DIAGRAM



Parts per reel			Reel dimensions (mm)					Tape dimensions (mm)					
Part number	7"(178mm)	13"(330mm)	A	B	C	D	E	W	D0	P0	P1	P2	T
SMDS540-27N	600	2500	178/330	60/100	12.4	16.4	13	12	1.5	4	8	2	3.05
SMDS540-30N	600	2500	178/330	60/100	12.4	16.4	13	12	1.5	4	8	2	3.05
SMDS540-33N	600	2500	178/330	60/100	12.4	16.4	13	12	1.5	4	8	2	3.05
SMDS540-36N	600	2500	178/330	60/100	12.4	16.4	13	12	1.5	4	8	2	3.05
SMDS540-39N	600	2500	178/330	60/100	12.4	16.4	13	12	1.5	4	8	2	3.05
SMDS540-43N	600	2500	178/330	60/100	12.4	16.4	13	12	1.5	4	8	2	3.05
SMDS540-47N	600	2500	178/330	60/100	12.4	16.4	13	12	1.5	4	8	2	3.05
SMDS550-47N	500	750	178/330	60/100	12.4	16.4	13	16	1.5	4	12	2	4.05
SMDS550-68N	500	750	178/330	60/100	12.4	16.4	13	16	1.5	4	12	2	4.05
SMDS550-82N	500	750	178/330	60/100	12.4	16.4	13	16	1.5	4	12	2	4.05
SMDS570-90N	/	750	178/330	60/100	16.4	20.4	13	16	1.5	4	12	2	6.00
SMDS570-110	/	750	178/330	60/100	16.4	20.4	13	16	1.5	4	12	2	6.00
SMDS570-130	/	750	178/330	60/100	16.4	20.4	13	16	1.5	4	12	2	6.00
SMDS570-160	/	750	178/330	60/100	16.4	20.4	13	16	1.5	4	12	2	6.00
SMDS570-180	/	750	178/330	60/100	16.4	20.4	13	16	1.5	4	12	2	6.00
SMDS570-220	/	750	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	6.00
SMDS570-270	/	750	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	6.00
SMDS570-300	/	750	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	6.00
SMDS580-330	/	600	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	7.00
SMDS580-360	/	600	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	7.70
SMDS580-390	/	600	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	7.70
SMDS580-430	/	600	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	7.70
SMDS580-500	/	600	178/330	60/100	24.4	28.4	13	24	1.5	4	12	2	7.50

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