

Higher SRF than our other power inductors

High inductance with tight tolerance

Excellent current handling for a part this size

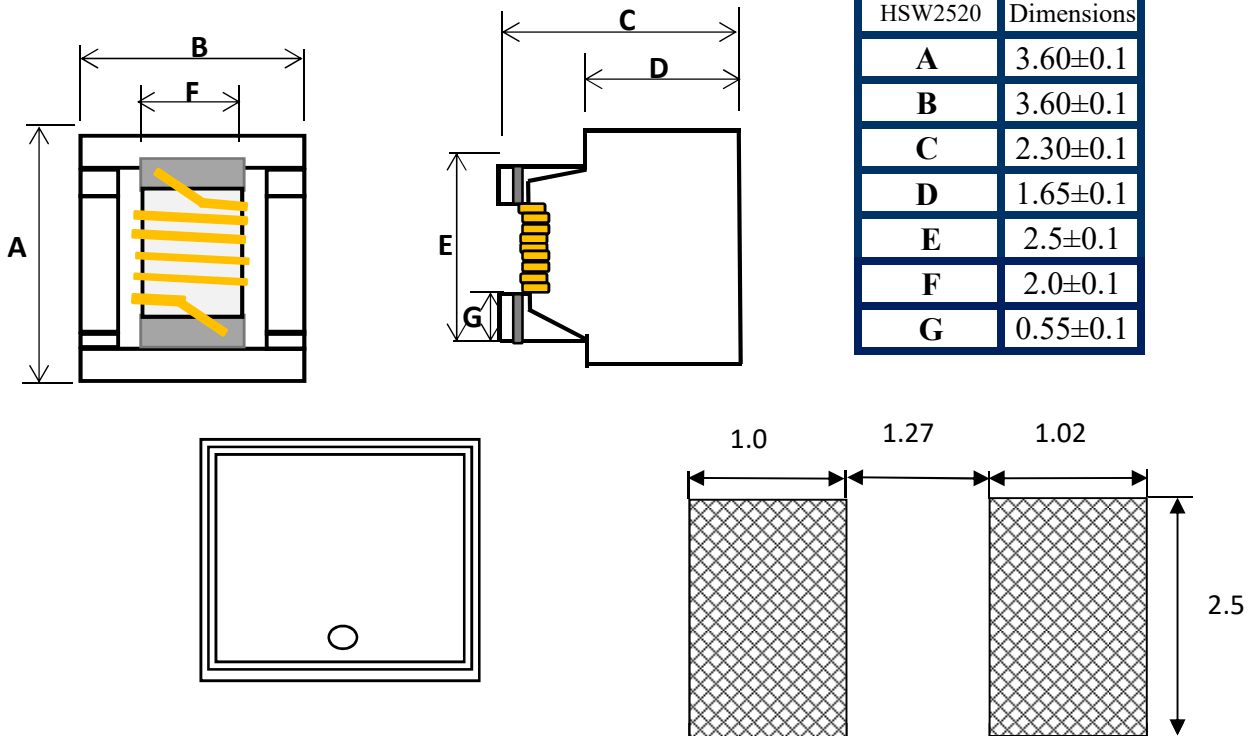
AEC-Q200 Grade 2 (-40°C to +105°C)

HSW2520

HSW2520

[1008 inch]

◆ SHAPE & DIMENSIONS



◆ PART NUMBER CONSTRUCTION

HSW	2520	—	4R7	K	T
Series name	L*W*T Dimensions (mm)		Inductance (uH) at 1MHz	Tolerance	Taping
High SRF/Q SMD WireWound Inductor	2.5*2.0*2.2		4.7	±10%	

◆ OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY.

Type	Temperature range		Reel Dimensions (mm)	Package quantity (pieces/reel)
	Operating Temperature ℃	Storage Temperature ℃		
HSW250-Series	-40 to +105	-40 to +145	ø180	2,000



◆ ELECTRICAL CHARACTERISTICS

Inductance uH ±10% 【100KHz 0.1V】	Q 1MHz min.	DC Resistance (Ω) max.	SRF (MHz) min	Isat(A)			Irms(A)		P/N
				10% drop	20% drop	30% drop	20℃	40℃	
1.0	35	0.05	387	3.50	3.90	4.20	1.40	2.0	HSW2520-1R0KT
1.5	35	0.06	276	2.70	3.20	3.50	1.40	2.0	HSW2520-1R5KT
1.8	35	0.09	253	2.30	2.70	3.00	0.98	1.4	HSW2520-1R8KT
2.2	36	0.10	228	2.40	2.80	3.10	1.20	1.7	HSW2520-2R2KT
2.7	38	0.14	207	1.60	2.00	2.30	1.00	1.4	HSW2520-2R7KT
3.3	26	0.84	199	1.50	1.60	1.60	0.51	0.67	HSW2520-3R3KT
3.9	38	0.26	185	1.50	1.80	2.00	0.82	1.10	HSW2520-3R9KT
4.7	38	0.35	160	1.30	1.60	1.70	0.70	0.95	HSW2520-4R7KT
5.6	38	0.36	150	1.50	1.70	1.80	0.66	0.87	HSW2520-5R6KT
6.8	38	0.58	120	1.30	1.50	1.60	0.45	0.76	HSW2520-6R8KT
10	38	0.92	105	0.84	1.00	1.10	0.40	0.59	HSW2520-100KT
15	38	1.15	35	0.81	0.87	0.90	0.36	0.51	HSW2520-150KT
22	40	1.4	26	0.67	0.75	0.79	0.33	0.44	HSW2520-220KT
33	45	1.61	20	0.53	0.61	0.68	0.30	0.42	HSW2520-330KT
39	45	1.85	16	0.49	0.56	0.60	0.28	0.39	HSW2520-390KT
47	45	2.5	19	0.47	0.52	0.54	0.23	0.31	HSW2520-470KT
68	45	3.8	12	0.38	0.42	0.45	0.21	0.26	HSW2520-680KT
82	45	4.3	9.0	0.33	0.38	0.42	0.18	0.26	HSW2520-820KT
100	45	5.8	7.0	0.35	0.38	0.39	0.16	0.20	HSW2520-101KT
120	50	6.3	7.0	0.30	0.33	0.35	0.14	0.20	HSW2520-121KT
150	50	7.5	5.8	0.27	0.30	0.33	0.13	0.18	HSW2520-151KT
220	55	10	5.0	0.21	0.24	0.27	0.13	0.17	HSW2520-221KT
330	55	11.5	3.8	0.19	0.21	0.23	0.11	0.15	HSW2520-331KT
470	55	16.3	3.1	0.14	0.17	0.19	0.10	0.13	HSW2520-471KT
560	55	18.1	2.8	0.13	0.15	0.17	0.09	0.12	HSW2520-561KT
680	55	24	2.5	0.11	0.15	0.17	0.07	0.11	HSW2520-681KT
820	45	26	1.5	0.10	0.12	0.13	0.07	0.10	HSW2520-821KT
1000	45	29	2.0	0.11	0.13	0.14	0.07	0.10	HSW2520-102KT

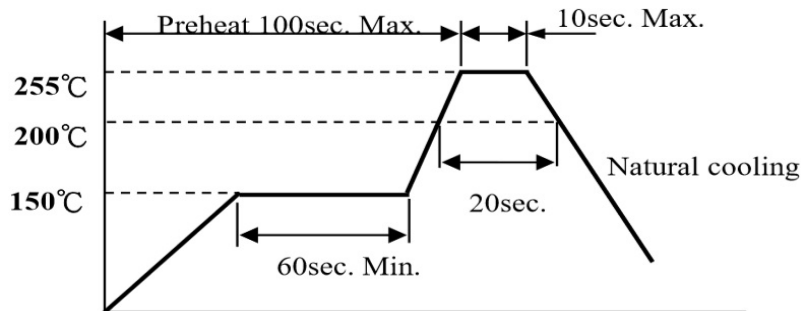
※Ambient temp -40 to 105 ℃ with (40℃ rise) Irms current..

◆ Measurement

Measurement Item	Meter	Manufacturer
Inductance	4263B	Agilent
DC Resistance	16502	Chroma
SRF	4287A	Agilent
Q	4287A	Agilent

◆ RECOMMENDED REFLOW PROFILE

2019/7/24



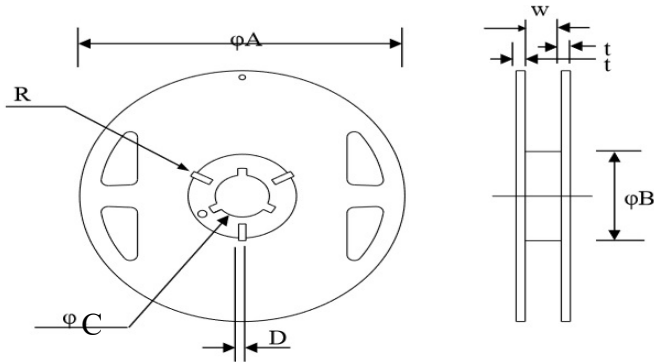
◆ MECHANICAL RELIABILITY

TEST ITEM	Specification & Requirement	Method Used
Solderability	The surface of terminal/pin tested shall be covered with new solder by 90%	Solder heat proof: Preheating: 150 ±10°C 60 seconds Soldering: 245 ±5°C for 4 ±1 sec
Solder Heat Resistance	Components should have not evidence of Impedance: within ±15% of initial value	Preheating: 150°C 60secs Flux: rosin Dip time: 10±0.5 secs
Terminal strength	Series No.	F (Kg)
	2012	1.0
	2520	1.0
	3216	1.0
	3225	1.0
	4532	1.2
Solder a chip to test substrate and then laterally apply a force in the arrow direction 		

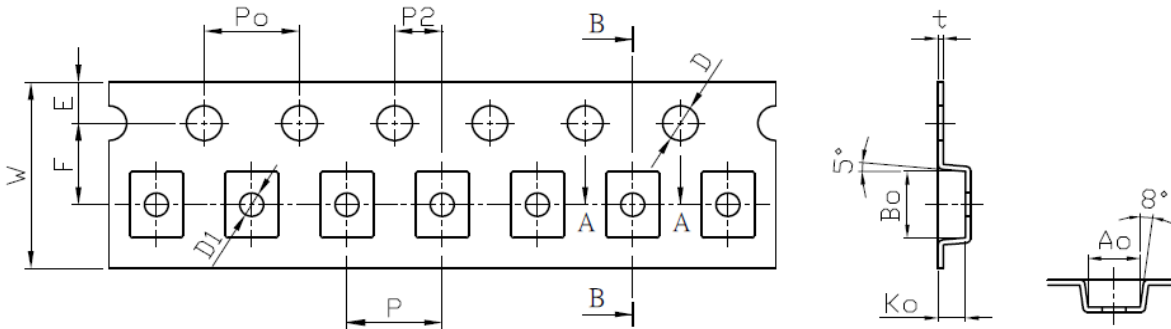
ENDURANCE RELIABILITY

Thermal Shock	Impedance change within ± 15% Without mechanical damage	-65°C, (30 mins) -> room temp. (2 mins) 125°C, (30 mins) -> room temp. (2 mins) 50 cycles
Humidity Resistance		Apply IDC current @ 60°C ambient Humidity: 90% Duration: 168 hrs
Low Temp. Storing		Storing Temp. -40 ±2 °C for total 168 +5/-0 hours
High Temp. Storing		Storing Temp. 145±2°C for total 168 +5/-0 hours

◆ Reel Dimension & Tape Dimension



Type	A(mm)	B(mm)	C(mm)	W(mm)
7"x8mm	178±1.0	60±0.5	13.5±0.5	9.5±0.5



Size	Ao(mm)	Bo(mm)	Ko(mm)	W(mm)	E(mm)	F(mm)	P(mm)	Po(mm)	P2(mm)	D(mm)	D1(mm)
2520	3.70	3.70	2.40	12.00	1.75	5.50	8.00	4.00	2.00	1.50	1.50

*實物照片如右圖所示:

Pinhole 朝上或朝下皆可



TOP

BOTTOM

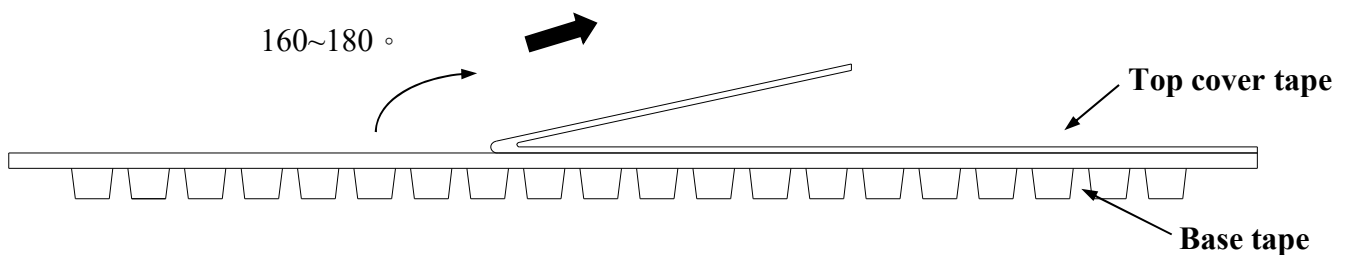
◆ Cover Tape Peel Strength

The force for tearing off cover tape is 0.05~0.69(N) in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa



◆ Packaging Quantity

Chip Size	2520
8mm / Reel	750pcs