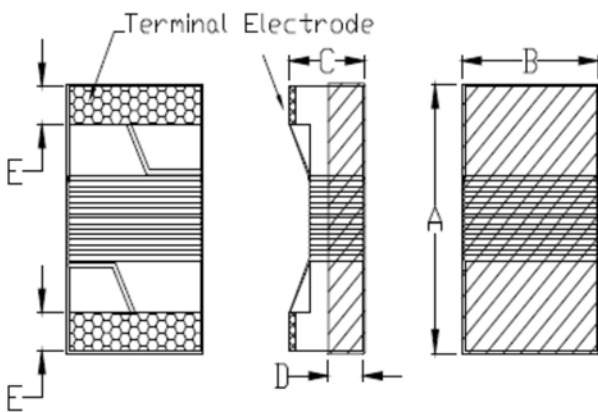


FEATRLRES

- Ceramic core wire wound construction.
- No batch to batch variations in inductance
- High Reliability due to ceramic wire wound construction.
- High frequency application.
- Small footprint as well as low profile.
- 100% Lead(Pb) & Halogen-Free and RoHS compliant

CONFIGLRATIONS & DIMENSIONS (unit in mm)



Size	A	B	C	D	E
SWI0805	2.29max	1.73max	1.52max	0.51ref.	0.44±0.1

ELECTRICAL CHARACTERISTICS

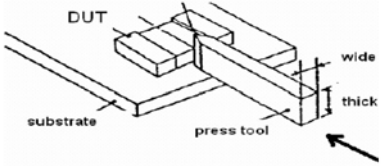
Part Number	Inductance (nH)	Tolerance	Test Frequency (Hz)	Q min.	I rms (mA)max	DCR (Ω) max.	SRF (MHz) min.
SWI0805UF-2N8C	2.8±0.2nH	C,S	0.1V/250M	80/1500	800	0.06	7900
SWI0805UF-3N0C	3.0±0.2nH	C,S	0.1V/250M	65/1500	800	0.06	7900
SWI0805UF-3N3C	3.3±0.2nH	C,S	0.1V/250M	50/1500	600	0.08	7900
SWI0805UF-5N6C	5.6±0.2nH	C,S	0.1V/250M	65/1000	600	0.08	5500
SWI0805UF-6N8C	6.8±0.2nH	C,J	0.1V/250M	50/1000	600	0.11	5500
SWI0805UF-7N5C	7.5±0.2nH	C,J	0.1V/250M	50/1000	600	0.14	4500
SWI0805UF-8N2C	8.2±0.2nH	C,J	0.1V/250M	50/1000	600	0.12	4700
SWI0805UF-10NG	10±2%	G,J	0.1V/250M	60/500	600	0.10	4200
SWI0805UF-12NG	12±2%	G,J	0.1V/250M	50/500	600	0.15	4000
SWI0805UF-15NG	15±2%	G,J	0.1V/250M	50/500	600	0.17	3400
SWI0805UF-18NG	18±2%	G,J	0.1V/250M	50/500	600	0.20	3300
SWI0805UF-22NG	22±2%	G,J	0.1V/250M	55/500	500	0.22	2600
SWI0805UF-24NG	24±2%	G,J	0.1V/250M	50/500	500	0.22	2000
SWI0805UF-27NG	27±2%	G,J	0.1V/250M	55/500	500	0.25	2500
SWI0805UF-33NG	33±2%	G,J	0.1V/250M	60/500	500	0.27	2050

SWI0805UF-36NG	36±2%	G,J	0.1V/250M	55/500	500	0.27	1700
SWI0805UF-39NG	39±2%	G,J	0.1V/250M	60/500	500	0.29	2000
SWI0805UF-43NG	43±2%	G,J	0.1V/200M	60/500	500	0.34	1650
SWI0805UF-47NG	47±2%	G,J	0.1V/200M	60/500	500	0.31	1650
SWI0805UF-56NG	56±2%	G,J	0.1V/200M	60/500	500	0.34	1550
SWI0805UF-68NG	68±2%	G,J	0.1V/200M	60/500	500	0.38	1450
SWI0805UF-82NG	82±2%	G,J	0.1V/150M	65/500	400	0.42	1300
SWI0805UF-91NG	91±2%	G,J	0.1V/150M	65/500	400	0.48	1200
SWI0805UF-R10G	100±2%	G,J	0.1V/150M	65/500	400	0.46	1200
SWI0805UF-R11G	110±2%	G,J	0.1V/150M	50/250	400	0.48	1000
SWI0805UF-R12G	120±2%	G,J	0.1V/150M	50/250	400	0.51	1100
SWI0805UF-R15G	150±2%	G,J	0.1V/100M	50/250	400	0.56	920
SWI0805UF-R18G	180±2%	G,J	0.1V/100M	50/250	400	0.64	870
SWI0805UF-R20G	200±2%	G,J	0.1V/100M	50/250	400	0.68	860
SWI0805UF-R22G	220±2%	G,J	0.1V/100M	50/250	400	0.70	850
SWI0805UF-R24G	240±2%	G,J	0.1V/100M	44/250	350	1.00	690
SWI0805UF-R25G	250±2%	G,J	0.1V/100M	45/250	350	1.20	660
SWI0805UF-R27G	270±2%	G,J	0.1V/100M	48/250	350	1.00	650
SWI0805UF-R33G	330±2%	G,J	0.1V/100M	48/250	310	1.40	600
SWI0805UF-R39G	390±2%	G,J	0.1V/100M	48/250	290	1.50	560
SWI0805UF-R47G	470±2%	G,J	0.1V/50M	33/100	250	1.70	375
SWI0805UF-R56G	560±2%	G,J	0.1V/25M	23/50	230	1.90	340
SWI0805UF-R62G	620±2%	G,J	0.1V/25M	23/50	210	2.20	220
SWI0805UF-R68G	680±2%	G,J	0.1V/25M	23/50	190	2.20	188
SWI0805UF-R82G	820±2%	G,J	0.1V/25M	23/50	180	2.35	215
SWI0805UF-1R0G	1000±2%	G,J	0.1V/25M	20/50	170	2.5	100
SWI0805UF-1R2G	1200±2%	G,J	0.1V/7.9M	18/25	170	2.5	100

- NOTE: Tolerance C = ± 0.2%, S = ± 0.3%, G = ± 2%, J = ± 5%, K = ± 10%
- Rated Current: 15°C rise above 25°C ambient.

Reliability and Test Condition

Item	Performance	Test Condition															
Operating temperature	-40~+125°C (Including self - temperature rise)																
Storage temperature	1. -10~+40°C, 50~60%RH (Product with taping) 2. -40~+125°C (on board)																
Electrical Performance Test																	
Inductance	Refer to standard electrical characteristics list.	HP4284A, CH11025, CH3302, CH1320, CH1320S LCR Meter.															
DCR		CH16502, Agilent33420A Micro-Ohm Meter.															
Saturation Current (Isat)	Approximately $\Delta L30\%$	Saturation DC Current (Isat) will cause L0 to drop $\Delta L(\%)$															
Heat Rated Current (Irms)	Approximately $\Delta T40^\circ\text{C}$	Heat Rated Current (Irms) will cause the coil temperature rise $\Delta T(^\circ\text{C})$. 1. Applied the allowed DC current 2. Temperature measured by digital surface thermometer															
Reliability Test																	
Life Test	Appearance : No damage. Inductance : within $\pm 10\%$ of initial value Q : Shall not exceed the specification value. RDC : within $\pm 15\%$ of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020D Classification Reflow Profiles) Temperature : $125 \pm 2^\circ\text{C}$ (Inductor) Applied current : rated current Duration : 1000 \pm 12hrs Measured at room temperature after placing for 24 \pm 2 hrs															
Load Humidity		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020D Classification Reflow Profiles) Humidity : $85 \pm 2 \times \text{R.H.}$, Temperature : $85^\circ\text{C} \pm 2^\circ\text{C}$ Duration : 1000hrs Min. with 100% rated current Measured at room temperature after placing for 24 \pm 2 hrs															
Moisture Resistance		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020D Classification Reflow Profiles) 1. Baked at 50°C for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to $65 \pm 2^\circ\text{C}$ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs. 3. Raise temperature to $65 \pm 2^\circ\text{C}$ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25°C in 2.5hrs, keep at 25°C for 2 hrs then keep at -10°C for 3 hrs 4. Keep at 25°C 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.															
Thermal shock		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020D Classification Reflow Profiles) Condition for 1 cycle Step1 : $-40 \pm 2^\circ\text{C}$ 30 \pm 5min Step2 : $25 \pm 2^\circ\text{C}$ ≤ 0.5 min Step3 : $125 \pm 2^\circ\text{C}$ 30 \pm 5min Number of cycles : 500 Measured at room temperature after placing for 24 \pm 2 hrs															
Vibration		Oscillation Frequency: 10 ~ 2K ~ 10Hz for 20 minutes Equipment : Vibration checker Total Amplitude: $1.52\text{mm} \pm 10\%$ Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations).															
Bending		Shall be mounted on a FR4 substrate of the following dimensions: ≥ 0805 inch(2012mm):40x100x1.2mm < 0805 inch(2012mm):40x100x0.8mm Bending depth: ≥ 0805 inch(2012mm):1.2mm < 0805 inch(2012mm):0.8mm duration of 10 sec.															
Shock		Appearance : No damage. Impedance : within $\pm 15\%$ of initial value Inductance : within $\pm 10\%$ of initial value Q : Shall not exceed the specification value. RDC : within $\pm 15\%$ of initial value and shall not exceed the specification value															
Solder ability	More than 95% of the terminal electrode should be covered with solder.	Preheat: 150°C , 60sec. Solder: Sn96.5% Ag3% Cu0.5% Temperature: $245 \pm 5^\circ\text{C}$ <table border="1" data-bbox="1018 1854 1455 1989"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (Vi)ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table>	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)ft/sec													
SMD	50	11	Half-sine	11.3													
Lead	50	11	Half-sine	11.3													

		Flux for lead free: Rosin. 9.5% ° Dip time: 4±1sec ° Depth: completely cover the termination Depth: completely cover the termination								
Resistance to Soldering Heat		<table border="1"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 ±5 (solder temp)</td> <td>10 ±1</td> <td>25mm/s ±6 mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1
Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles							
260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1							
Terminal Strength	Appearance : No damage. Impedance : within±15% of initial value Inductance : within±10% of initial value Q : Shall not exceed the specification value. RDC : within ±15% of initial value and shall not exceed the specification value e	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force(>0805:1kg , <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 								

Note : When there are questions concerning measurement result : measurement shall be made after 48 ± 2 hours of recovery under the standard condition.