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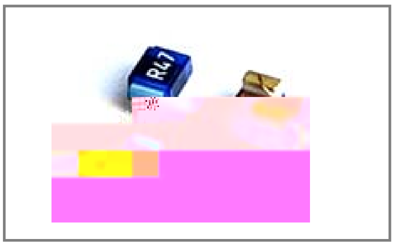
Automotive Grade Wire Wound Chip Ceramic Inductors



Feature

Minature Size,Suitable For SMT.

Nusing Terminal Electrode Structure To Restrain The Parasitic Component Effect Quite Caused By Lead.

High Q Value And Tight Inductance Tolerance.

Pass AEC-Q200 Compliance Test.

Application

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Automobile information system; Audio visual entertainment system;Body and comfort systems.etc.

Part Number

AHW	0603	UC	068	J	S	T

Product TypeI：

AHW

AHW:Automotive Grade Wire Wound Inductor Series

Dimensions：0402(1.0×0.5mm)　0603　1.6×0.8mm　　0805　2.0×1.2mm

Material Code：UC---　　　Ceramic Core

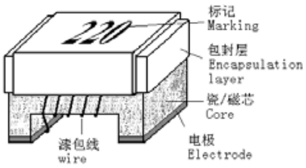
Inductance：1N0=1.0nH　010=10nH　R10=100nH　1R0=1.0μH　100=10μH

Tolerance　F---±1%　G---±2%　J---±5%　K---±10%　M---±20%

Terminal　G---　　　Gold　S---　　　Tin

Packaging：T:　　　　Tape & Reel B:　　　Bulk

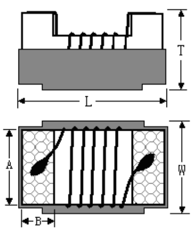
Product Structure



Dimension

Unit　mm　inch

Size	L (Max)	W (Max)	T (Max)	A	B
1005 (0402)	1.19 (0.047)	0.66 (0.026)	0.60 (0.024)	0.50 (0.020)	0.23 (0.009)
1608 (0603)	1.78 (0.070)	1.10 (0.043)	0.95 (0.037)	0.76 (0.030)	0.30 (0.012)
2012 (0805)	2.30 (0.091)	1.70 (0.067)	1.52 (0.060)	1.27 (0.050)	0.50 (0.020)



ELECTRICAL CHARACTERISTICS

0402 Type

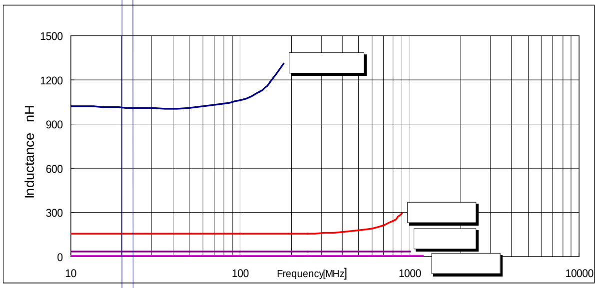
Part NO	Inductance (nH)	Tolerance	Q

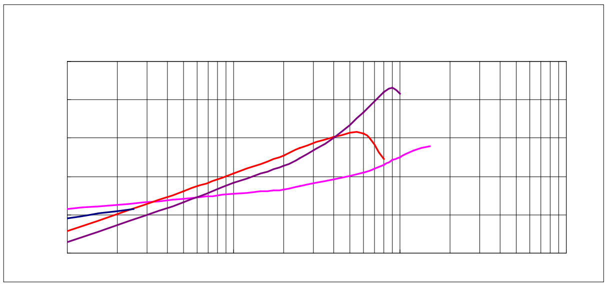
AHW0603UC012□ST	12@250MHz	G,J,K	35@250MHz	4000	0.130	700
AHW0603UC013□ST	13@250MHz	G,J,K	30@250MHz	4000	0.140	700
AHW0603UC014□ST	14@250MHz	G,J,K	35@250MHz	4000	0.140	700
AHW0603UC015□ST	15@250MHz	G,J,K	30@250MHz	4000	0.150	700
AHW0603UC016□ST	16@250MHz	G,J,K	34@250MHz	3300	0.160	700
AHW0603UC018□ST	18@250MHz	G,J,K	35@250MHz	3K0	0.170	700
AHW0603UC020□ST	20@250MHz	G,J,K	38@250MHz	3000	0.190	700
AHW0603UC022□ST	22@250MHz	G,J,K	38@250MHz	3000	0.190	700
AHW0603UC024□ST	24@250MHz	G,J,K	37@250MHz	2650	0.200	700
AHW0603UC025□ST	25@250MHz	G,J,K	38@250MHz	2600	0.2K	700
AHW0603UC027□ST	27@250MHz	G,J,K	36@250MHz	2800	0.220	600
AHW0603UC030□ST	30@250MHz	G,J,K	37@250MHz	2250	0.220	600
AHW0603UC033□ST	33@250MHz	G,J,K	36@250MHz	2300	0.220	600
AHW0603UC036□ST	36@250MHz	G,J,K	36@250MHz	2080	0.250	600
AHW0603UC039□ST	39@250MHz	G,J,K	40@250MHz	2200	0.250	600
AHW0603UC043□ST	43@250MHz	G,J,K	36@250MHz	2000	0.280	600
AHW0603UC047□ST	47@200MHz	G,J,K	36@200MHz	2000	0.280	600
AHW0603UC049□ST	49@200MHz	G,J,K	36@200MHz	2000	0.280	600
AHW0603UC050□ST	50@200MHz	G,J,K	36@200MHz	1900	0.295	600
AHW0603UC051□ST	51@200MHz	G,J,K	36@200MHz	1900	0.300	600
AHW0603UC056□ST	56@200MHz	G,J,K	38@200MHz	1900	0.280	600
AHW0603UC068□ST	68@200MHz	G,J,K	36@200MHz	1700	0.340	600
AHW0603UC072□ST	72@150MHz	G,J,K	34@150MHz	1700	0.530	400
AHW0603UC075□ST	75@150MHz	G,J,K	30@150MHz	1400	0.600	400
AHW0603UC082□ST	82@150MHz	G,J,K	34@150MHz	1700	0.550	400
AHW0603UC091□ST	91@150MHz	G,J,K	30@150MHz	1400	0.630	400
AHW0603UCRK□ST	K0@150MHz	G,J,K	30@150MHz	1400	0.630	400
AHW0603UCR11□ST	1K@150MHz	G,J,K	32@150MHz	1350	0.670	300
AHW0603UCR12□ST	120@150MHz	G,J,K	32@150MHz	1300	0.730	300
AHW0603UCR15□ST	150@150MHz	G,J,K	28@150MHz	990	0.800	280
AHW0603UCR16□ST	160@K0MHz	G,J,K	25@K0MHz	990	1.250	250
AHW0603UCR18□ST	180@K0MHz	G,J,K	25@K0MHz	990	1.450	240
AHW0603UCR20□ST	200@K0MHz	G,J,K	25@K0MHz	900	1.550	200
AHW0603UCR22□ST	220@K0MHz	G,J,K	25@K0MHz	900	2.K0	200
AHW0603UCR25□ST	250@K0MHz	G,J,K	25@K0MHz	822	3.550	120
AHW0603UCR27□ST	270@K0MHz	G,J,K	24@K0MHz	900	2.300	170
AHW0603UCR30□ST	300@K0MHz	G,J,K	24@K0MHz	K00	3.000	K0
AHW0603UCR33□ST	330@K0MHz	G,J,K	25@K0MHz	900	3.890	K0
AHW0603UCR39□ST	390@K0MHz	G,J,K	25@K0MHz	800	4.350	K0
AHW0603UCR47□ST	470@K0MHz	G,J,K	25@K0MHz	700	7.000	75

0805 Type

Part NO	Inductance (nH)	Tolerance	Q (Min)	SRF (MHZ) Min	Rdc（Ω）Max	Idc(A) Max
AHW0805UC2N2□GT	2.2@250MHz	K	50@1500MHz	8500	0.030	800
AHW0805UC2N7□GT	2.7@250MHz	J,K	50@1500MHz	8000	0.045	800
AHW0805UC3N3□GT	3.3@250MHz	K	35@1500MHz	7900	0.090	600
AHW0805UC4N7□GT	4.7@250MHz	K	40@K00MHz	6000	0.050	600
AHW0805UC5N□GT	5.6@250MHz	J,K	50@K00MHz	5500	0.065	600
AHW0805UC6N8□GT	6.8@250MHz	J,K	50@K00MHz	5500	0.1K	600
AHW0805UC8N2□GT	8.2@250MHz	J,K	35@K00MHz	4700	0.200	600
AHW0805UC0K□GT	K@250MHz	G,J,K	50@500MHz	4200	0.150	600
AHW0805UC012□GT	12@250MHz	G,J,K	50@500MHz	4000	0.150	600
AHW0805UC015□GT	15@250MHz	G,J,K	45@500MHz	3400	0.170	600
AHW0805UC018□GT	18@250MHz	G,J,K	55@500MHz	3300	0.200	600
AHW0805UC022□GT	22@250MHz	G,J,K	55@500MHz	2600	0.220	500
AHW0805UC027□GT	27@250MHz	G,J,K	55@500MHz	2500	0.250	500
AHW0805UC033□GT	33@250MHz	G,J,K	55@500MHz	2050	0.270	500
AHW0805UC039□GT	39@250MHz	G,J,K	55@500MHz	2000	0.290	500
AHW0805UC047□GT	47@200MHz	G,J,K	55@500MHz	1650	0.3K	500
AHW0805UC056□GT	56@200MHz	G,J,K	55@500MHz	1550	0.340	500
AHW0805UC068□GT	68@200MHz	G,J,K	55@500MHz	1450	0.380	500
AHW0805UC075□GT	75@200MHz	G,J,K	55@500MHz	1400	0.400	400
AHW0805UC082□GT	82@150MHz	G,J,K	55@500MHz	1300	0.420	400
AHW0805UCRK□GT	K0@150MHz	G,J,K	50@500MHz	1200	0.460	400
AHW0805UCR12□GT	120@150MHz	G,J,K	45@250MHz	1K0	0.5K	400
AHW0805UCR15□GT	150@K0MHz	G,J,K	45@250MHz	920	0.560	400
AHW0805UCR18□GT	180@K0MHz	G,J,K	45@250MHz	870	0.640	400
AHW0805UCR22□GT	220@K0MHz	G,J,K	40@250MHz	850	1.050	400
AHW0805UCR27□GT	270@K0MHz	G,J,K	40@250MHz	650	1.K0	350
AHW0805UCR33□GT	330@K0MHz	J,K	40@250MHz	600	1.400	3K
AHW0805UCR39□GT	390@K0MHz	J,K	40@250MHz	560	1.500	290
AHW0805UCR47□GT	470@50MHz	J,K	33@K0MHz	375	2.000	250
AHW0805UCR56□GT	560@25MHz	J,K	23@50MHz	340	1.900	230
AHW0805UCR68□GT	680@25MHz	J,K	23@50MHz	300	2.K0	190
AHW0805UCR75□GT	750@25MHz	J,K	23@50MHz	280	2.120	180
AHW0805UCR82□GT	820@25MHz	J,K	23@50MHz	250	2.140	180
AHW0805UCR91□GT	9K@25MHz	J,K	20@50MHz	220	2.280	180
AHW0805UC1R0□GT	K00@25MHz	J,K	20@50MHz	200	2.400	170
AHW0805UC1R2□GT	1200@7.9MHz	J,K	18@50MHz	180	2.550	170
AHW0805UC1R5□GT	1500@7.9MHz	J,K	18@50MHz	170	2.800	160
AHW0805UC1R8□GT	1800@7.9MHz	J,K	18@50MHz	140	3.800	150
AHW0805UC2R2□GT	2200@7.9MHz	J,K	16@7.9MHz	50	4.200	150

	Mechanical Shock	L/L≤±5%； Q/Q≤±10%. No Visible damage； Inductance： L/L≤±5%； Q：△Q/Q≤±10%.	6ms Half sine wave. Peak value 100g. Normal duration 6 ms; Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks)
	Vibration	L/L≤±5%； Q/Q≤±10%. No Visible damage； Inductance： L/L≤±5%； Q：△Q/Q≤±10%.	. The entire frequency range of 10 to 2000 Hz and return to 10 Hz shall be traversed in 20 minutes. This cycle shall be preformed 12 time in each of three mutually perpendicular directions (total of 36 times), so that the motion shall be applied for a total period of approximately 12 hours. Peak value 5g.
	Resistance to Soldering Heat	L/L≤±5%； Q/Q≤±10%. No Visible damage； Inductance： L/L≤±5%； Q：△Q/Q≤±10%.	(260±5) 10±1) s Solder bath; Temperature (260±5) ; Immersion timer (10±1) seconds.
	Solderability	95% or more of electrode area shall be coated by new solder.	(245±5) 3±0.3) s Solder bath; Lead-free solder; Temperature (245±5) ; Immersion timer (3±0.3) seconds.
	Board flex	L/L≤±5%； Q/Q≤±10%. No Visible damage； Inductance： L/L≤±5%； Q：△Q/Q≤±10%.	1.6mm 1mm/s 2mm 60s 5s The testing samples shall be mounted on a 100mm×40mm FR4 PCB board，which is 1.6mm±0.2mm thick。 Bending shall be applied to the 2.0mm with 1.0mm/sec； Duration：60±5s。





Packaging

* Taping drawings

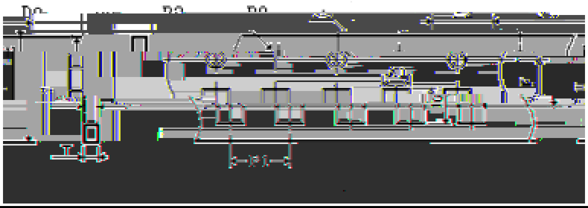
* Reel dimensions (Unit:mm)

* Leader and blank portion

* Taping dimensions (Unit: mm)

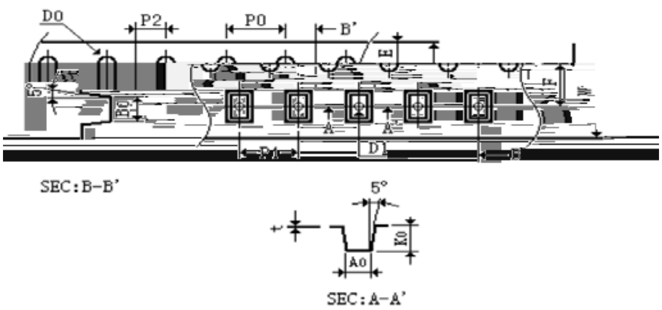
Paper tape

PAPER TAPE



Part NO.	W	E	F	D0	P0	P1	P2	P0×10	A0	B0	K0	T
0402	8.00	1.75	3.50	1.55	4	2	2	40	0.74	1.23	0.60	0.75
0603	8.00	1.75	3.50	1.55	4	4	2	40	1.20	1.85	0.95	1.05

EMBOSSED tape



Part NO.	W	E	F	D0	D1	P0	P1	P2	P0×10	t	A0	B0	K0
0805	8.00	1.75	3.50	1.55	0.65	4	4	2	40	0.23	1.85	2.45	1.50

* Packaging number (Unit: Pcs)

Size		0402	0603	0805
Per Reel		5000	4000	3000
Per Box	3	15000	12000	9000
	5	25000	20000	15000
	10	50000	40000	30000
Per Case	1.5	75000	60000	45000
	3	150000	120000	90000
	4	200000	160000	120000
	5	300000	240000	180000