FEATURES 特征

- Small chip suitable for surface mounting.
  小尺寸，可表面贴装
- Large inductance with ferrite material.
  铁氧体材料具有大电感量
- Single-sided package.
  单面封装
- Operating Temp：-45℃~+85℃(Including self heating).
  工作温度范围:-45℃~+85℃(包括自身温度上升)



APPLICATIONS 用途

- Mobile phones, TWS headsets, smart watches and other portable devices.
  手机、TWS耳机、智能手表等便携式设备

PART NUMBERING 产品型号

AHW	1608	F	-	100	□	T	F
①	②	③		④	⑤	⑥	⑦

① Series Name	
AHW	Wire Wound Chip Ferrite Inductor

② External Dimensions[inch]
1005[0402]
1608[0603]
2012[0805]
2520[1008]
3225[1210]
4532[1812]

③ Feature Type	
F	Ferrite core

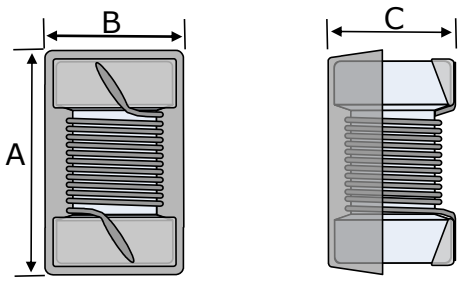
④ Nominal Inductance	
Code (example)	Nominal Value［μH］
1R0	1.0
100	10
101	100

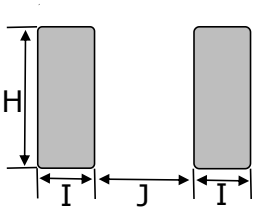
⑤ Inductance Tolerance	
J	±5%
K	±10%
M	±20%

⑥ Packaging	
T	Tape & Reel

⑦ HSF Products	
F	Hazardous Substance Free Products

DIMENSIONS & RECOMMENDED LAND PATTERN 尺寸及推荐焊盘





Recommended Land Pattern

Unit: mm

Series	Dimensions			Recommended Land Pattern		
	A	B	C	I	H	J
	Max.			Typ.		
AHW1005F	1.19	0.70	0.64	0.36	0.66	0.46
AHW1608F	1.80	1.25	1.10	0.64	1.02	0.64
AHW2012F	2.40	1.73	1.52	1.02	1.78	0.76
AHW2520F	2.92	2.70	2.23	1.02	2.54	1.27
AHW3225F	3.50	2.90	2.60	1.02	2.54	1.78
AHW4532F	4.80	3.40	3.15	1.14	3.05	3.00

ELECTRICAL CHARACTERISTICS 特性规格表

● AHW1005F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW1005F-22N□TF	0.022	K,M	7.9	/	2500	0.065	1300
AHW1005F-36N□TF	0.036	K,M	7.9	/	2300	0.075	1300
AHW1005F-39N□TF	0.039	K,M	7.9	/	2200	0.115	830
AHW1005F-56N□TF	0.056	K,M	7.9	/	1900	0.095	1000
AHW1005F-75N□TF	0.075	K,M	7.9	/	1600	0.15	600
AHW1005F-78N□TF	0.078	K,M	7.9	/	1600	0.13	970
AHW1005F-R10□TF	0.1	K,M	7.9	/	1400	0.16	900
AHW1005F-R11□TF	0.11	K,M	7.9	/	1000	0.20	850
AHW1005F-R12□TF	0.12	K,M	7.9	/	1000	0.20	850
AHW1005F-R15□TF	0.15	K,M	7.9	/	1220	0.26	630
AHW1005F-R18□TF	0.18	K,M	7.9	/	1150	0.28	560
AHW1005F-R20□TF	0.2	K,M	7.9	/	1000	0.44	400
AHW1005F-R22□TF	0.22	K,M	7.9	/	1150	0.53	380
AHW1005F-R25□TF	0.25	K,M	7.9	/	900	0.90	360
AHW1005F-R27□TF	0.27	K,M	7.9	/	860	0.90	360
AHW1005F-R30□TF	0.3	K,M	7.9	/	860	0.90	360
AHW1005F-R33□TF	0.33	J,K,M	7.9	/	820	0.56	350

ELECTRICAL CHARACTERISTICS 特性规格表

AHW1005F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW1005F-R36□TF	0.36	J,K,M	7.9	/	810	0.90	250
AHW1005F-R39□TF	0.39	J,K,M	7.9	/	760	1.00	200
AHW1005F-R47□TF	0.47	J,K,M	7.9	/	650	1.00	200
AHW1005F-R56□TF	0.56	J,K,M	7.9	/	600	1.20	200
AHW1005F-R68□TF	0.68	J,K,M	7.9	/	290	1.60	100
AHW1005F-R82□TF	0.82	J,K,M	7.9	/	385	5.85	90
AHW1005F-1R0□TF	1.0	J,K,M	7.9	/	200	6.50	50
AHW1005F-2R2□TF	2.2	J,K,M	7.9	/	100	2.30	40
AHW1005F-3R3□TF	3.3	J,K,M	7.9	/	80	3.60	10
AHW1005F-4R7□TF	4.7	J,K,M	7.9	/	50	4.80	10
AHW1005F-6R8□TF	6.8	J,K,M	7.9	/	50	6.10	10
AHW1005F-100□TF	10	J,K,M	1	/	20	8.50	10

AHW1608F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW1608F-R12□TF	0.12	K,M	7.9	12	1000	0.15	1000
AHW1608F-R15□TF	0.15	K,M	7.9	12	950	0.15	1000
AHW1608F-R18□TF	0.18	K,M	7.9	12	950	0.20	1000
AHW1608F-R22□TF	0.22	K,M	7.9	12	775	0.30	700
AHW1608F-R27□TF	0.27	K,M	7.9	12	775	0.30	700
AHW1608F-R33□TF	0.33	K,M	7.9	12	725	0.32	600
AHW1608F-R39□TF	0.39	K,M	7.9	12	620	0.51	500
AHW1608F-R47□TF	0.47	J,K,M	7.9	12	540	0.43	570
AHW1608F-R56□TF	0.56	J,K,M	7.9	12	600	0.65	400
AHW1608F-R68□TF	0.68	J,K,M	7.9	12	500	1.00	380
AHW1608F-R82□TF	0.82	J,K,M	7.9	12	500	1.30	350
AHW1608F-1R0□TF	1.0	J,K,M	7.9	12	400	0.81	330
AHW1608F-1R2□TF	1.2	J,K,M	7.9	12	380	1.70	320
AHW1608F-1R5□TF	1.5	J,K,M	7.9	12	300	1.30	310
AHW1608F-1R8□TF	1.8	J,K,M	7.9	12	180	2.20	300
AHW1608F-2R2□TF	2.2	J,K,M	7.9	12	180	2.30	280
AHW1608F-2R7□TF	2.7	J,K,M	7.9	12	150	2.60	250

ELECTRICAL CHARACTERISTICS 特性规格表

AHW1608F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW1608F-3R3□TF	3.3	J,K,M	7.9	12	150	2.90	230
AHW1608F-3R9□TF	3.9	J,K,M	7.9	12	100	2.00	200
AHW1608F-4R7□TF	4.7	J,K,M	7.9	12	100	4.00	200
AHW1608F-5R6□TF	5.6	J,K,M	7.9	12	32	2.60	240
AHW1608F-6R8□TF	6.8	J,K,M	7.9	12	31	3.90	200
AHW1608F-8R2□TF	8.2	J,K,M	7.9	12	26	4.20	190
AHW1608F-100□TF	10	J,K,M	2.5	12	25	4.80	180
AHW1608F-150□TF	15	J,K,M	2.5	10	23	8.50	170
AHW1608F-220□TF	22	J,K,M	2.5	10	10	12.0	100

AHW2012F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW2012F-R12□TF	0.12	K,M	7.9	19	340	0.27	750
AHW2012F-R15□TF	0.15	K,M	7.9	19	480	0.30	720
AHW2012F-R18□TF	0.18	K,M	7.9	19	480	0.40	720
AHW2012F-R22□TF	0.22	J,K,M	7.9	19	480	0.40	720
AHW2012F-R27□TF	0.27	J,K,M	7.9	19	500	0.31	650
AHW2012F-R39□TF	0.39	J,K,M	7.9	19	500	0.31	720
AHW2012F-R47□TF	0.47	J,K,M	7.9	19	500	0.31	720
AHW2012F-R56□TF	0.56	J,K,M	7.9	12	400	0.46	400
AHW2012F-R62□TF	0.62	J,K,M	7.9	19	400	0.46	590
AHW2012F-R68□TF	0.68	J,K,M	7.9	19	400	0.46	590
AHW2012F-R81□TF	0.81	J,K,M	7.9	12	360	1.00	520
AHW2012F-R88□TF	0.88	J,K,M	7.9	12	360	1.00	520
AHW2012F-R91□TF	0.91	J,K,M	7.9	12	360	1.00	430
AHW2012F-1R0□TF	1.0	J,K,M	7.9	12	360	1.00	430
AHW2012F-1R2□TF	1.2	J,K,M	7.9	12	350	1.15	410
AHW2012F-1R5□TF	1.5	J,K,M	7.9	12	300	1.20	400
AHW2012F-1R8□TF	1.8	J,K,M	7.9	12	300	1.35	380
AHW2012F-2R2□TF	2.2	J,K,M	7.9	12	170	1.50	350
AHW2012F-2R7□TF	2.7	J,K,M	7.9	12	100	1.70	320
AHW2012F-3R0□TF	3	J,K,M	7.9	12	90	1.80	300

ELECTRICAL CHARACTERISTICS 特性规格表

AHW2012F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW2012F-3R3□TF	3.3	J,K,M	7.9	12	90	1.80	300
AHW2012F-3R9□TF	3.9	J,K,M	7.9	12	90	1.95	280
AHW2012F-4R7□TF	4.7	J,K,M	7.9	12	85	2.05	250
AHW2012F-5R6□TF	5.6	J,K,M	7.9	12	70	2.30	240
AHW2012F-6R8□TF	6.8	J,K,M	7.9	12	55	2.60	220
AHW2012F-7R5□TF	7.5	J,K,M	7.9	12	50	2.60	180
AHW2012F-8R2□TF	8.2	J,K,M	7.9	12	50	3.00	180
AHW2012F-100□TF	10	J,K,M	2.5	10	30	2.55	150
AHW2012F-120□TF	12	J,K,M	2.5	10	16	3.50	100
AHW2012F-150□TF	15	J,K,M	2.5	10	16	4.20	100
AHW2012F-180□TF	18	J,K,M	2.5	10	15	4.50	95
AHW2012F-220□TF	22	J,K,M	2.5	10	14	6.00	80
AHW2012F-270□TF	27	J,K,M	2.5	10	17	10.7	60
AHW2012F-330□TF	33	J,K,M	2.5	10	17	10.7	60
AHW2012F-470□TF	47	J,K,M	2.5	10	14	13.8	55
AHW2012F-560□TF	56	J,K,M	2.5	10	8	14.0	30
AHW2012F-680□TF	68	J,K,M	2.5	8	11	17.5	40
AHW2012F-101□TF	100	J,K,M	1	8	5	25.0	30
AHW2012F-111□TF	110	J,K,M	1	8	5	26.0	20

AHW2520F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW2520F-R39□TF	0.39	K,M	7.9	12	400	0.40	500
AHW2520F-R47□TF	0.47	K,M	25	12	600	0.27	700
AHW2520F-R56□TF	0.56	K,M	7.9	12	230	0.62	700
AHW2520F-R68□TF	0.68	J,K,M	7.9	12	230	0.62	700
AHW2520F-R82□TF	0.82	J,K,M	7.9	12	230	0.62	700
AHW2520F-R90□TF	0.9	J,K,M	7.9	20	300	0.35	1400
AHW2520F-1R0□TF	1.0	J,K,M	7.9	18	230	0.62	700
AHW2520F-1R2□TF	1.2	J,K,M	7.9	18	210	0.68	650
AHW2520F-1R5□TF	1.5	J,K,M	7.9	18	190	0.76	630
AHW2520F-1R8□TF	1.8	J,K,M	7.9	18	170	0.84	600

ELECTRICAL CHARACTERISTICS 特性规格表

AHW2520F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW2520F-2R0□TF	2.0	J,K,M	7.9	18	160	1.10	550
AHW2520F-2R2□TF	2.2	J,K,M	7.9	18	150	1.10	520
AHW2520F-2R7□TF	2.7	J,K,M	7.9	18	135	1.28	490
AHW2520F-3R3□TF	3.3	J,K,M	7.9	18	120	1.46	450
AHW2520F-3R9□TF	3.9	J,K,M	7.9	18	105	2.30	300
AHW2520F-4R7□TF	4.7	J,K,M	7.9	18	90	2.00	400
AHW2520F-5R6□TF	5.6	J,K,M	7.9	15	80	1.80	380
AHW2520F-6R8□TF	6.8	J,K,M	7.9	15	70	2.00	360
AHW2520F-8R2□TF	8.2	J,K,M	7.9	15	65	2.65	330
AHW2520F-100□TF	10	J,K,M	2.5	12	60	2.95	300
AHW2520F-150□TF	15	J,K,M	2.5	12	30	3.70	280
AHW2520F-180□TF	18	J,K,M	2.5	12	26	4.00	160
AHW2520F-220□TF	22	J,K,M	2.5	12	22	6.14	270
AHW2520F-330□TF	33	J,K,M	2.5	10	12	7.00	200
AHW2520F-390□TF	39	J,K,M	2.5	10	16	10.0	180
AHW2520F-470□TF	47	J,K,M	2.5	10	10	10.7	160
AHW2520F-560□TF	56	J,K,M	2.5	10	8	12.0	170
AHW2520F-680□TF	68	J,K,M	2.5	10	6	13.5	145
AHW2520F-820□TF	82	J,K,M	2.5	8	6	20.0	100
AHW2520F-101□TF	100	J,K,M	1	8	4	21.0	80

AHW3225F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW3225F-R56□TF	0.56	K,M	25	20	180	0.55	450
AHW3225F-R82□TF	0.82	K,M	7.9	20	200	0.40	450
AHW3225F-1R0□TF	1.0	J,K,M	7.9	20	200	0.40	450
AHW3225F-1R2□TF	1.2	J,K,M	7.9	20	200	0.40	450
AHW3225F-1R5□TF	1.5	J,K,M	7.9	20	200	0.40	450
AHW3225F-1R8□TF	1.8	J,K,M	7.9	20	195	0.80	450
AHW3225F-2R2□TF	2.2	J,K,M	7.9	30	175	0.80	450
AHW3225F-3R3□TF	3.3	J,K,M	7.9	20	150	1.20	400
AHW3225F-4R7□TF	4.7	J,K,M	7.9	18	60	1.30	350

ELECTRICAL CHARACTERISTICS 特性规格表

AHW3225F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW3225F-5R6□TF	5.6	J,K,M	7.9	18	50	2.00	320
AHW3225F-6R8□TF	6.8	J,K,M	7.9	18	35	1.50	310
AHW3225F-8R2□TF	8.2	J,K,M	7.9	15	33	1.60	305
AHW3225F-100□TF	10	J,K,M	2.5	15	30	1.00	300
AHW3225F-120□TF	12	J,K,M	2.5	15	25	1.80	300
AHW3225F-150□TF	15	J,K,M	2.5	15	22	2.00	225
AHW3225F-180□TF	18	J,K,M	2.5	15	22	2.05	215
AHW3225F-220□TF	22	J,K,M	2.5	15	20	2.40	210
AHW3225F-270□TF	27	J,K,M	2.5	15	20	2.80	160
AHW3225F-330□TF	33	J,K,M	2.5	15	15	2.90	160
AHW3225F-470□TF	47	J,K,M	2.5	15	10	5.20	140
AHW3225F-560□TF	56	J,K,M	2.5	8	8	5.60	125
AHW3225F-680□TF	68	J,K,M	1	6	10	13.0	100
AHW3225F-820□TF	82	J,K,M	1	6	10	13.0	100
AHW3225F-101□TF	100	J,K,M	1	6	10	13.0	100
AHW3225F-221□TF	220	J,K,M	1	8	2.6	30.0	65
AHW3225F-331□TF	330	J,K,M	1	8	2.3	35.0	55
AHW3225F-471□TF	470	J,K,M	1	8	2	42.0	40
AHW3225F-561□TF	560	J,K,M	1	8	3	60.0	10
AHW3225F-621□TF	620	J,K,M	1	8	2	85.0	10
AHW3225F-681□TF	680	J,K,M	1	6	2	90.0	10
AHW3225F-102□TF	1000	J,K,M	1	6	1	130	30

AHW4532F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW4532F-R33□TF	0.33	J,K	25.2	10	380	0.13	1000
AHW4532F-R47□TF	0.47	J,K	25.2	10	330	0.14	1000
AHW4532F-R56□TF	0.56	J,K	25.2	10	300	0.15	1000
AHW4532F-R82□TF	0.82	J,K	25.2	10	250	0.20	1000
AHW4532F-1R0□TF	1.0	J,K	7.96	15	200	0.22	1000
AHW4532F-1R2□TF	1.2	J,K	7.96	15	200	0.35	1000
AHW4532F-1R5□TF	1.5	J,K	7.96	15	180	0.32	1000

ELECTRICAL CHARACTERISTICS 特性规格表

- AHW4532F Series

Part Number	Inductance	Inductance Tolerance	L Test Freq.	Quality Factor	Self-resonant Frequency	DC Resistance	Heat Rating Current
				Min.	Min.	Max.	Max.
Unit	μH	-	MHz	-	MHz	Ω	mA
Symbol	L	-	Freq.	Q	S.R.F	DCR	Irms
AHW4532F-1R8□TF	1.8	J,K	7.96	15	160	0.35	950
AHW4532F-2R2□TF	2.2	J,K	7.96	15	150	0.37	900
AHW4532F-2R7□TF	2.7	J,K	7.96	15	145	0.37	850
AHW4532F-3R3□TF	3.3	J,K	7.96	15	140	0.48	800
AHW4532F-3R9□TF	3.9	J,K	7.96	15	135	0.60	750
AHW4532F-4R7□TF	4.7	J,K	7.96	15	120	1.00	700
AHW4532F-5R6□TF	5.6	J,K	7.96	15	110	0.55	650
AHW4532F-6R8□TF	6.8	J,K	7.96	15	80	0.80	600
AHW4532F-8R2□TF	8.2	J,K	7.96	15	70	0.85	600
AHW4532F-100□TF	10	J,K	2.52	10	60	1.00	550
AHW4532F-120□TF	12	J,K	2.52	10	55	1.10	550
AHW4532F-150□TF	15	J,K	2.52	10	35	1.20	500
AHW4532F-180□TF	18	J,K	2.52	10	29	1.20	500
AHW4532F-220□TF	22	J,K	2.52	10	20	1.30	450
AHW4532F-270□TF	27	J,K	2.52	10	20	1.50	400
AHW4532F-330□TF	33	J,K	2.52	10	18	1.70	350
AHW4532F-390□TF	39	J,K	2.52	10	14	1.80	350
AHW4532F-470□TF	47	J,K	2.52	10	10	2.00	300
AHW4532F-560□TF	56	J,K	2.52	10	10	2.20	290
AHW4532F-680□TF	68	J,K	2.52	10	5.4	2.40	260
AHW4532F-820□TF	82	J,K	2.52	10	5.2	2.80	240
AHW4532F-101□TF	100	J,K	0.796	10	4	3.00	220
AHW4532F-121□TF	120	J,K	0.796	10	3.3	3.30	220
AHW4532F-151□TF	150	J,K	0.796	10	3	3.70	200
AHW4532F-181□TF	180	J,K	0.796	10	3	4.50	200
AHW4532F-221□TF	220	J,K	0.796	10	2.5	8.00	170
AHW4532F-271□TF	270	J,K	0.796	10	2.2	8.50	160
AHW4532F-331□TF	330	K	0.796	10	2	9.00	150
AHW4532F-391□TF	390	K	0.796	10	1.8	9.50	130
AHW4532F-471□TF	470	K	0.796	8	1.6	12.0	120
AHW4532F-561□TF	560	K	0.796	8	1.5	12.5	110
AHW4532F-681□TF	680	K	0.796	8	1.5	14.0	100
AHW4532F-751□TF	750	K	0.796	8	1.5	14.5	95
AHW4532F-821□TF	820	K	0.796	8	1.5	15.0	95
AHW4532F-102□TF	1000	K	0.252	6	1.4	16.5	90

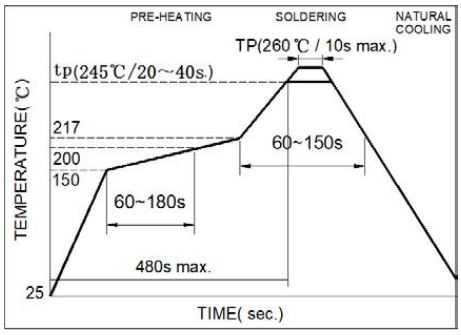
- All test data is referenced to 25°C ambient.
- Rating DC current: Temperature rise(△T) is 40℃ approximately at Irms.
- Storage temp.: -10℃ ~ +40℃ R.H.: 60% Max.

RELIABILITY TEST 可靠性试验

Test Item	Test Requirements	Test Conditions
High Temperature	1. No visible mechanical damage 2. ΔL/L ≤ 10% 3. ΔQ/Q ≤ 30%	Test temperature: 85±3°C, test duration: 1000 hrs. Specimens shall be stabilized under standard atmospheric conditions for 24±4 hours prior to measurement.
Low Temperature	1. No visible mechanical damage 2. ΔL/L ≤ 10% 3. ΔQ/Q ≤ 30%	Test temperature: -25±3°C, test duration: 1000 hrs. Specimens shall be stabilized under standard atmospheric conditions for 24±4 hours prior to measurement.
Damp Heat (Steady State)	1. No visible mechanical damage 2. ΔL/L ≤ 10% 3. ΔQ/Q ≤ 30%	Test temperature: 40±2°C, test humidity: 90-95% RH, test duration: 1000 hrs. Specimens shall be stabilized under standard atmospheric conditions for 24±4 hours prior to measurement. DCR shall remain within specification limits.
Thermal Shock	1. No visible mechanical damage 2. ΔL/L ≤ 10% 3. ΔQ/Q ≤ 30%	One cycle consists of: -25±3°C for 30 min → 25±2°C for 3 min → 85±3°C for 30 min → 25±2°C for 3 min. Total 100 cycles. Specimens shall be stabilized under standard atmospheric conditions for 24±4 hours prior to measurement. DCR shall remain within specification limits.
Load Life	1. No visible mechanical damage 2. ΔL/L ≤ 10% 3. ΔQ/Q ≤ 30%	Test temperature: 85±3°C, test duration: 1000 hrs, with rated current applied. Specimens shall be stabilized under standard atmospheric conditions for 24±4 hours prior to measurement.
Vibration	1. No visible mechanical damage 2. ΔL/L ≤ 10% 3. ΔQ/Q ≤ 30%	Frequency range: (10→55→10) Hz, total amplitude: 1.5 mm, duration: 2 hours in each of X, Y, Z directions (6 hours total). Specimens shall be stabilized under standard atmospheric conditions for 1-2 hours prior to measurement.
Resistance to Soldering Heat	1. No visible mechanical damage 2. ΔL/L ≤ 10% 3. ΔQ/Q ≤ 30%	Preheat: 150°C for 1 min. Solder temperature: 260±5°C, immersion time: 10±2 seconds. Recovery time: ≥2 hours.
Solderability	No visible mechanical damage	1. Solder temperature: 245±5°C, dwell time: 5±0.5 s. 2. Solder coverage shall be ≥90% of the terminations (excluding the solder land area).
Board Flexure	No visible mechanical damage	Preconditioning: 1 reflow soldering cycle. Terminations soldered onto PCB. Static load applied gradually, T: 60±5 s, board deflection ≤2.0 mm.
Terminal Strength	No visible mechanical damage	Specified static load applied vertically to the terminal for 30±1 seconds. Verify no detachment of the component.

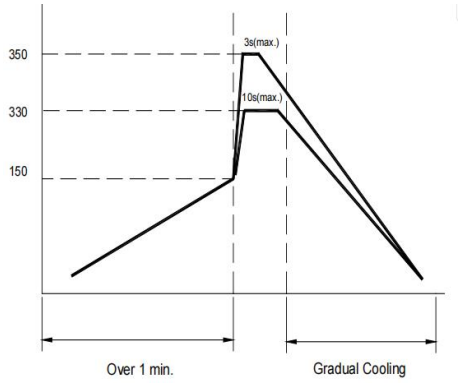
RECOMMENDED SOLDERING TECHNOLOGIES 回流焊建议

- Re-flow Soldering (Lead Free)
- ☆ Preheat circuit and products to 150℃
- ☆ 260℃ tip temperature (max)
- ☆ Reflow times: no more than 2 times
- ☆ Solder paste thickness: the best 0.08mm is ,but max is 0.1mm



- Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.

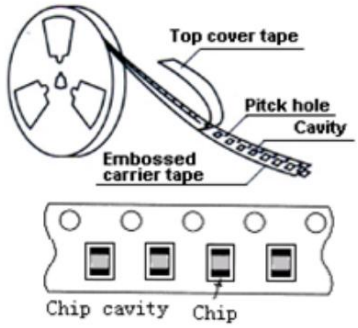
- Hand Soldering
- ☆ Use a 20 watt soldering iron with tip diameter of 1.0mm
- ☆ Limit soldering time to 3 sec

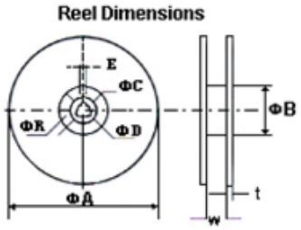


- Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.

PACKAGING 包装

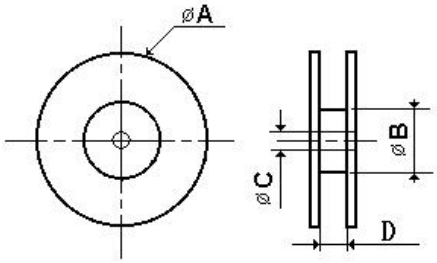
- Packaging type: Strapping packaging.
- 1005~3225 Series





Type	ΦA	ΦB	ΦC	ΦD	E	W	t
1005-3225	178	60	13	21	2	8.4	2

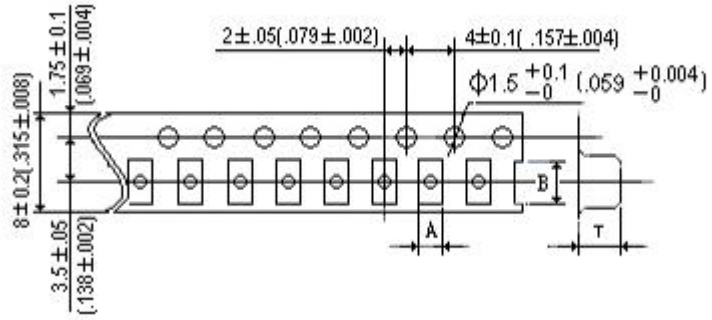
- 4532 Series



Type	ΦA	ΦB	ΦC	ΦD
4532	330	98	13	12.4

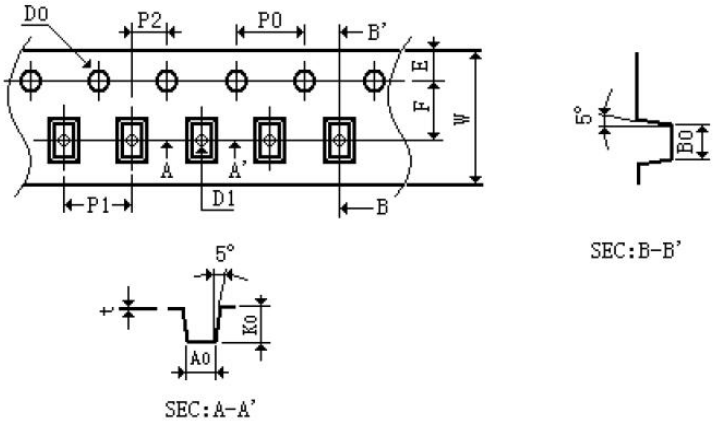
PACKAGING 包装

- Packaging type: Strapping packaging.
- 1005~3225 Series



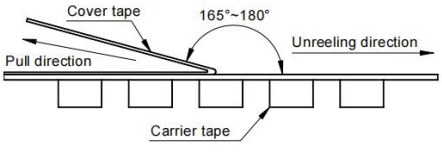
Type	A	B	T
1005	0.74	1.23	0.75
1608	1.15	1.83	0.95
2012	1.90	2.40	1.45
2520	2.73	2.90	2.34
3225	2.96	3.6	2.4

- 4532 Series



Type	W	E	F	D0	D1	P0	P1	P2	P0X10	t	A0	B0	K0
4532	12.00	1.75	5.50	1.55	1.50	4.00	8.00	2.00	40	0.25	3.22	4.82	2.98

- Peeling off force
- Pull strength 1005~3225:20g~80g.
- Pull strength 4532:10g~100g.
- Speed of peeling off:300mm/min ±10%.



- Packing Quantity.

Series	Quantity/Reel
AHW1005F	10000Pcs
AHW1608F	4000Pcs
AHW2012F	2000Pcs
AHW2520F	2000Pcs
AHW3225F	2000Pcs
AHW4532F	2000Pcs

PRECAUTIONS ON USE 使用注意事项

- Precautions on Use.

1. Always wear static control bands to protect against ESD.
2. Any devices used with the products (soldering irons, measuring instruments) should be properly grounded.
3. Keep bare hands and metal conductors (i.e., metal desk) away from electrodes or conductive areas that lead to electrodes.
4. Preheat when soldering.
5. Don't apply current in excess of the rated current value. It may reduce the impedance or inductance, or cause damage to components due to over-current.
6. For magnetic products, keep clear of anything that may generate magnetic fields such as speakers and coils. Use non-magnetic tweezers when handing the chips.
7. When soldering, the electrical characteristics may be varied due to hot energy and mechanical stress.
8. When coating products with resin, the relatively high resin curing stress may change the electrical characteristics. For exterior coating, select resin carefully so that electrical and mechanical performance of the product is not affected. Before using, please evaluate reliability with the product mounted in your application set.
9. When mount chips with adhesive in preliminary assembly, do appropriate check before the soldering stage, i.e., the size of land pattern, type of adhesive, amount applied, hardening of the adhesive on proper usage and amounts of adhesive to use.
10. Mounting density: Add special attention to radiating heat of products when mounting other components nearby. The excessive heat by other products may cause deterioration at joint of this product with substrate.
11. Since some products are constructed like an open magnetic circuit, narrow spacing between components may cause magnetic coupling.
12. Please do not give the product any excessive mechanical shocks in transportation.
13. Please do not touch wires by sharp terminals such as tweezers to avoid causing any damage to wires.
14. Please do not add any shock and power to the soldered product to avoid causing any damage to chip body.
15. Please do not touch the electrodes by naked hand as the solderability of the external electrodes may deteriorate by grease or oil on the skin.
16. Magnetic materials shall be far away from parts to avoid impacts on their electrical characteristics;
17. Parts could be damaged by external mechanical pressure or stacked heavy objects, as well as strong shaking & dropping;
18. Please do not store parts in bulk to prevent coils and parts being damaged;
19. Oversized external force to parts on PCB may lead to parts being damaged or slipped off;
20. Please do not use parts on edge or top of PCB board in your design to avoid parts being damaged during PCB is moved.
21. Please use flux contained with resin since the highly acidic (Chlorine content more than 0.2 wt%) or water-soluble one could damage the insulation film of wires, then causing short circuit of parts.
22. Please do not use the brush to clean product or its surroundings. If you use the brush to clean product or its surroundings on PCB,copper wire may be broke, causing the product open.
23. Avoid strong solvents, strong alkalis and chlorine-based cleaners. They swell and soften the UV coating, which may dissolve and peel off, damaging device appearance and partial functions.
24. Avoid ultrasonic processing, which may cause component falling off and poor pad contact.
25. When using APV products, customers should record the production batch number for traceability.



SAFETY REMINDERS 注意事项

SAFETY REMINDERS

● All products listed in this specification are developed, designed and intended for use in general electronics equipment. The products are not designed or Warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below. Please contact us for more details if you intend to use our products in the following applications.

☆ 1.Aerospace/aviation equipment

☆ 2.Transportation equipment (cars, electric trains, ships, etc.)

☆ 3.Medical equipment

☆ 4.Power-generation control equipment

☆ 5.Atomic energy-related equipment

☆ 6.Seabed equipment

☆ 7.Transportation control equipment

☆ 8.Public information-processing equipment

☆ 9.Military equipment

☆ 10.Electric heating apparatus, burning equipment

☆ 11.Disaster prevention/crime prevention equipment

☆ 12.Safety equipment

☆ 13.Other applications that are not considered general-purpose applications

● When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.