LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



4.0 x 4.0 x 1.2mm

ASPI-0412FS

RoHS/RoHS II Compliant

FEATURES:

- Small size and low profile: 1.2mm max
- Small DCR and high rated current
- High reliability to mechanical strength
- Shielded by magnetic powder molding
- Suitable for RoHS compliant reflow

APPLICATIONS:

- Mobile phones
- MP3, MP4 and other portable / communication products
- Digital cameras

ELECTRICAL SPECIFICATIONS:

Abracon P/N:	ASPI-0412FS Series
Operating Temperature & Humidity	-25˚C to +125˚C
Storage Temperature & Humidity:	-5˚C to +40˚C and RH 70% Max. (In tape and reel)

Part Number ASPI-0412FS- Inductance Code	Inductance	L Tolerance	DC Resistance Typ	DC Resistance Max	Saturation Current	Temperature Rise Current	Inductance Code
Units	µH	—	Ω	Ω	A	A	
Symbol	L	N, M	DCR	DCR	Isat	Irms	
ASPI-0412FS-R82	0.82	N	0.050	0.0650	3.02	1.65	R82
ASPI-0412FS-1R0	1.0	N	0.050	0.0650	2.61	1.65	1R0
ASPI-0412FS-1R5	1.5	N	0.065	0.8450	2.10	1.46	1R5
ASPI-0412FS-1R8	1.8	N	0.080	0.1040	2.12	1.32	1R8
ASPI-0412FS-2R2	2.2	M	0.080	0.1040	1.76	1.32	2R2
ASPI-0412FS-2R7	2.7	M	0.090	0.1170	1.90	1.25	2R7
ASPI-0412FS-3R3	3.3	M	0.110	0.1430	1.72	1.12	3R3
ASPI-0412FS-3R6	3.6	M	0.110	0.1430	1.20	1.12	3R6
ASPI-0412FS-4R3	4.3	M	0.140	0.1820	1.58	1.00	4R3
ASPI-0412FS-4R7	4.7	M	0.175	0.2280	1.15	1.05	4R7
ASPI-0412FS-5R1	5.1	M	0.155	0.2015	1.55	0.95	5R1
ASPI-0412FS-5R6	5.6	M	0.140	0.1820	1.00	1.00	5R6
ASPI-0412FS-6R8	6.8	M	0.198	0.2574	0.85	0.84	6R8
ASPI-0412FS-100	10	M	0.353	0.4590	0.80	0.77	100
ASPI-0412FS-120	12	M	0.290	0.3770	0.66	0.70	120
ASPI-0412FS-150	15	M	0.340	0.4420	0.56	0.64	150
ASPI-0412FS-180	18	M	0.470	0.6110	0.55	0.55	180
ASPI-0412FS-220	22	M	0.720	0.9360	0.46	0.49	220
ASPI-0412FS-270	27	M	0.720	0.9360	0.50	0.45	270
ASPI-0412FS-330	33	M	0.810	1.0530	0.42	0.42	330
ASPI-0412FS-360	36	M	0.900	1.1700	0.40	0.40	360
ASPI-0412FS-390	39	M	1.100	1.4300	0.55	0.37	390
ASPI-0412FS-470	47	M	1.100	1.4300	0.35	0.37	470
ASPI-0412FS-560	56	M	1.250	1.6250	0.33	0.33	560
ASPI-0412FS-680	68	M	1.950	2.5350	0.38	0.27	680
ASPI-0412FS-820	82	M	2.140	2.7820	0.28	0.26	820
ASPI-0412FS-101	100	M	2.210	2.8730	0.25	0.25	101

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4.0 x 4.0 x 1.2mm

Test Conditions:

1. Inductance: ZM2355 LCR meter or equivalent
2. RDC: HIOKI 3540 or equivalent
3. Isat : Based on inductance change (ΔL/Lo : ≤ -30%)
4. Irms : Based on temperature rise (ΔT : 40°C TYP.)
5. Test Freq: 100KHz, 1Vrms

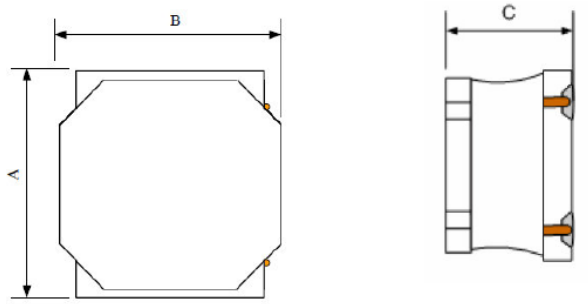
OPTIONS AND PART IDENTIFICATION

ASPI-0412FS-□□ -□

Inductance Code	Tolerance	Packaging
Please refer to the Electrical Spec Table	N: ±30%* M: ±20%*	T4: Tape and Reel (4kpcs / reel)

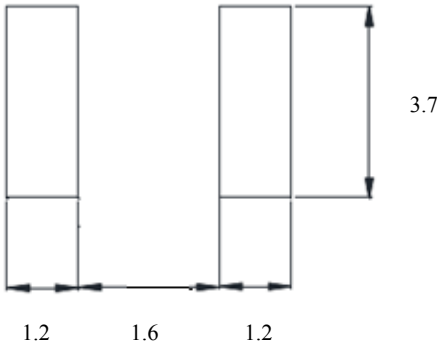
*N for L = 0.82 ~ 1.8μH
*M for L = 2.2 ~ 100μH

OUTLINE DRAWING:



A	B	C Max.
4.0±0.2	4.0±0.2	1.2

Recommended Land Pattern



Dimension: mm

Materials

No	Components	Material
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane System enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Plating Electrodes	Plating: Ag/Ni/Sn
5	Outer Electrodes	Top surface solder coating: Sn/Ag/Cu

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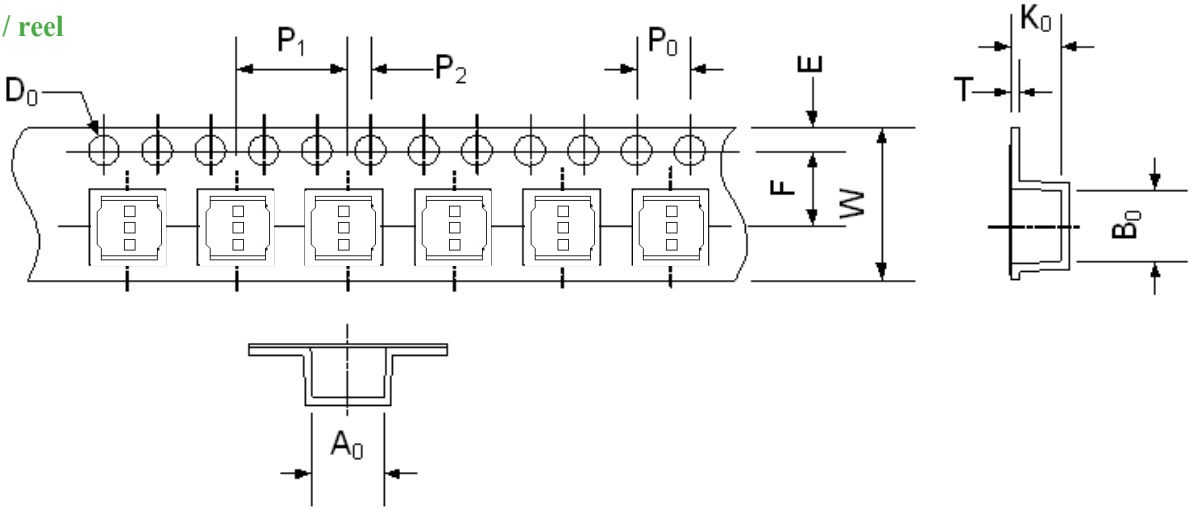
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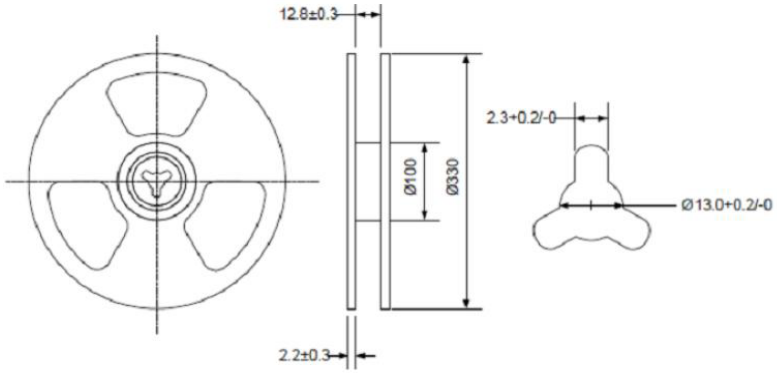
4.0 x 4.0 x 1.2mm

TAPE & REEL:

T4: 4,000pcs / reel

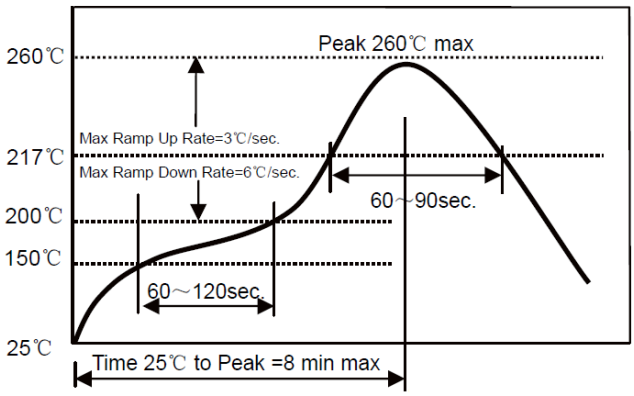


A_0	B_0	W	E	F	P_0	P_1	P_2	D_0	T	K_0
4.3±0.1	4.3±0.1	12.0±0.3	1.75±0.1	5.5±0.1	4.0±0.1	8.0±0.1	2.0±0.05	1.5+0.1/-0.0	0.35±0.03	1.6±0.1



Dimension: mm

REFLOW PROFILE:



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