COIL SPECIFICATION

Brand	ZenithTek
Product Series Code	ZPWM-1034N-Series
File Version	V1
Description	SMD Molding Power Inductor



Features

- High Rated Current
- Low DC Resistance
- High Frequency Range from 1MHz to 5MHz
- Halogen Free, Lead Free, RoHS and REACH Compliance

Applications

- DC to DC Converter
- Computing, Mobile, Networking
- IoT, Gaming, Audio Devices
- Industrial PC, Storage Devices

Product Identification

ZPWM	-	1034	N	-	1R0	M
1		2	3		4	5

1.Product Code:
ZPWM = ZenithTek Code.

2.Dimension Code:
1034 = 11.5 * 10 * 3.4 mm.

3.Type Code:
N = Molding Type.

4.Inductance Code:
1R0 = 1.0μH

5.Tolerance Code:
M = 20%.

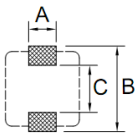
Dimension (Unit: mm)

1770 type.



Type	A	B	C(Max.)	D(Ref.)	E(Ref.)
ZPWM-1034	11.50(Max)	10.00±0.30	3.40	2.80	2.00

Land Pattern (Unit: mm)

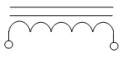


Type	A(Ref.)	B(Ref.)	C(Ref.)
ZPWM-1034	4.00	13.00	6.00

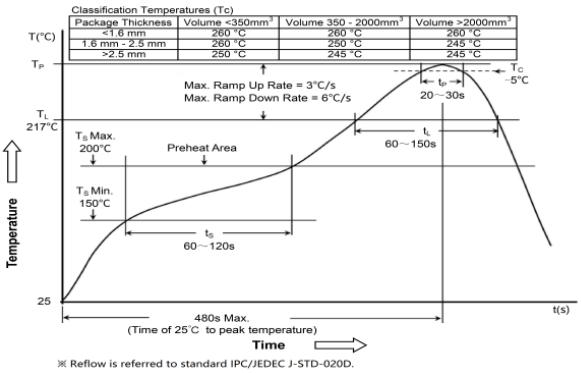
Product Structure



Schematic



Reflow Heat Endurance



※ Reflow is referred to standard IPC/JEDEC J-STD-020D.

Operating & Storage Conditions

Operating Temp. : -55°C~+125°C (including self-temp. rise)
Storage Temp. : -55°C~+125°C (for PCBA)

Standard & Atmospheric Conditions

Ambient Temp. : 20°C±15°C / Relative Humidity : 65±20%.
If there may be any doubt on the result, measurement shall be made within the following limits :
Ambient Temp. : 25°C±5°C / Relative Humidity : 75±10%.

Test Equipment

LCR Meter : WK-3260B / DC Source : WK-3265B.
Micro ohm Meter : HIOKI-RM3545.
Caliper : Mitsutoyo 150mm.

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Electrical Characteristic

Part Number	Inductance (μH)@0A	Tolerance (%)	Test Frequency (KHz)/1V/0A	DCR (mΩ/Typ.)	DCR (mΩ/Max.)	Heat Rating Current IDC(Amp./Typ.)	Saturation Current Isat(Amp./Typ.)
ZPWM-1034N-R22M	0.22	20	100	1.00	1.15	32	45
ZPWM-1034N-1R0M	1.00	20	100	4.00	4.50	15	30
ZPWM-1034N-2R2M	2.20	20	100	8.40	9.50	12	18
ZPWM-1034N-3R3M	3.30	20	100	13	14.5	10	16
ZPWM-1034N-4R7M	4.70	20	100	17	18	7.00	14
ZPWM-1034N-6R8M	6.80	20	100	25	28	5.00	10
ZPWM-1034N-100M	10	20	100	40	45	4.00	8.00

Note 1: Tolerance Code: M= ±20%.
Note 2: All test data is referenced to 25°C ambient.
Note 3: Operating Temperature Range -55°C to +125°C.
Note 4: Typical Heat Rating DC Current would cause an approximately ΔT of 40°C.
Note 5: Typical Saturation DC Current would cause L0 to drop approximately 30%.
Note 6: The Part temperature (ambient + ΔT) should not exceed 125°C under worst case operating conditions.
Note 7: Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

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Reliability Test

No.	Item	Specification	Test Method
1	Temperature Shock.	Appearance: No damage. Inductance: within ±10% of initial.	Temperature: -55±2℃~+125±2℃ Kept for 30 minutes. Transition time : 5 minutes. 100 Cycles.
2	Humidity Resistance.	Appearance: No damage. Inductance: within ±10% of initial.	Temperature: 40±2℃. Relative Humidity: 90%. Duration: 500 +4/-0 hours.
3	High Temperature Resistance.	Appearance: No damage. Inductance: within ±10% of initial.	Temperature: 125±2℃. Duration: 1000 +4/-0 hours.
4	Low Temperature Resistance.	Appearance: No damage. Inductance: within ±10% of initial.	Temperature: -55±2℃. Duration: 1000 +4/-0 hours.
5	Vibration test.	Appearance: No damage. Inductance: within ±10% of initial.	Oscillation Frequency: 10Hz to 55Hz to 10Hz in 60 seconds as a period. Total amplitude: 1.5mm. Testing Time: a period of 2 hours in each 3 mutually perpendicular directions (total of 6 hours).
6	Solderability Heat test.	Appearance: No damage. Inductance: within ±10% of initial.	Solder temperature: 260 +0/-5℃. Duration: 5 sec. Allowed reflow time: 2 times.
7	Solderability test.	90% or more of electrode area shall be coated by new solder.	Preheating: 160℃,60sec. Solder temperature: 245±5℃. Duration : 5 sec.
8	Flexure Strength.	No visible mechanical damage.	Flexure: 2mm. Pressurizing Speed: 0.5mm/sec. Keep time: 30±1sec.
9	Terminal Strength.	No visible mechanical damage.	Reflow 2 times. Force: 10N，Keep time: 5 sec，X,Y directs.

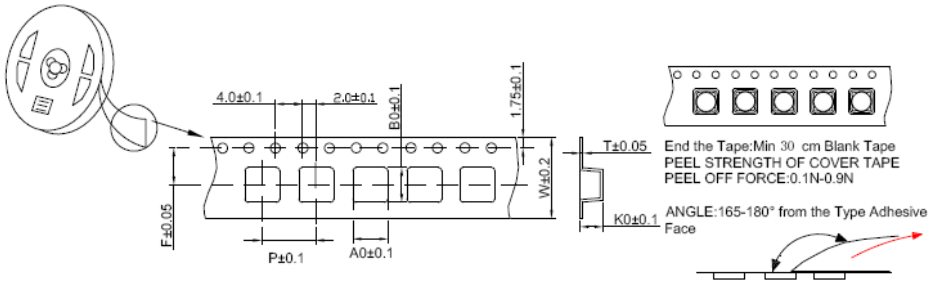
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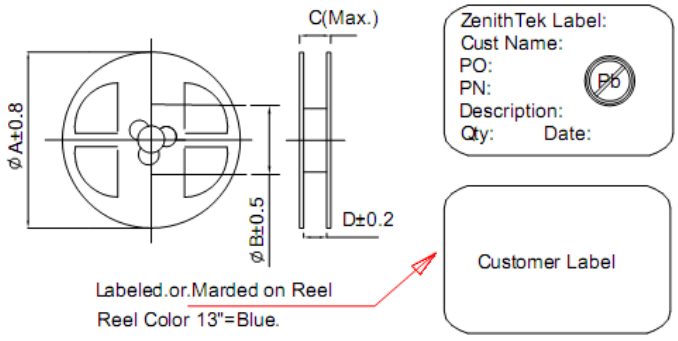
Package

Taping Dimension (mm)



Size(mm)	W	P	A0	B0	K0	T	F
ZPWM-1034	24.00	16.00	11.00	12.60	4.10	0.40	11.50

Reel Dimension (mm)



Size(mm)	A	B	C	D	Reel/Size	Qty./Size
ZPWM-1034	330	100	29.0	25.0	13”	800 Pcs

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Package

Box Dimension (mm)

