

APS-K Series

Features

- Alloy powder Inductor.
- 100% lead (Pb)-free.
- Lowest DCR/uH, in this package size.
- Handles high transient current spikes without saturation.
- Ultra low buzz noise, due to composite construction.

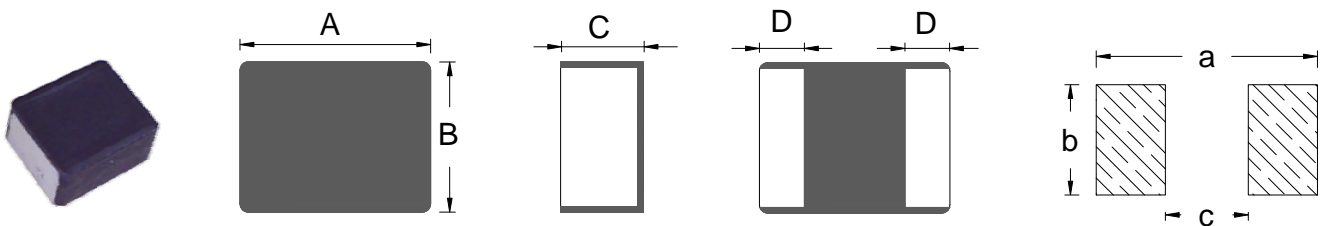
Applications

- Notebook/Desktop/Server applications.
- Low profile, high current power supplies.
- DC/DC converter for Field Programmable Gate Array(FPGA).

Test Equipment and Conditions

- All test data is referenced to 25°C ambient.
- Operating temperature range -40°C to +125°C.
- DC current(Irms)that will cause an approximateΔT of 40°C.
- DC current(Isat)that will cause Lo to drop approximately 40%.
- RoHS compliance.

External Dimensions (Unit:m/m)



Type	A	B	C	D Typ.	a Typ.	b Typ.	c Typ.	Q'Ty/Reel
APS02K10	2.0±0.2	1.6±0.2	1.05Max	0.5	2.3	1.6	0.9	3000
APS25K10	2.5±0.2	2.0±0.2	1.05Max	0.6	2.8	2.0	1.2	3000
APS25K12	2.5±0.2	2.0±0.2	1.25Max	0.6	2.8	2.0	1.2	3000

Part Number Code

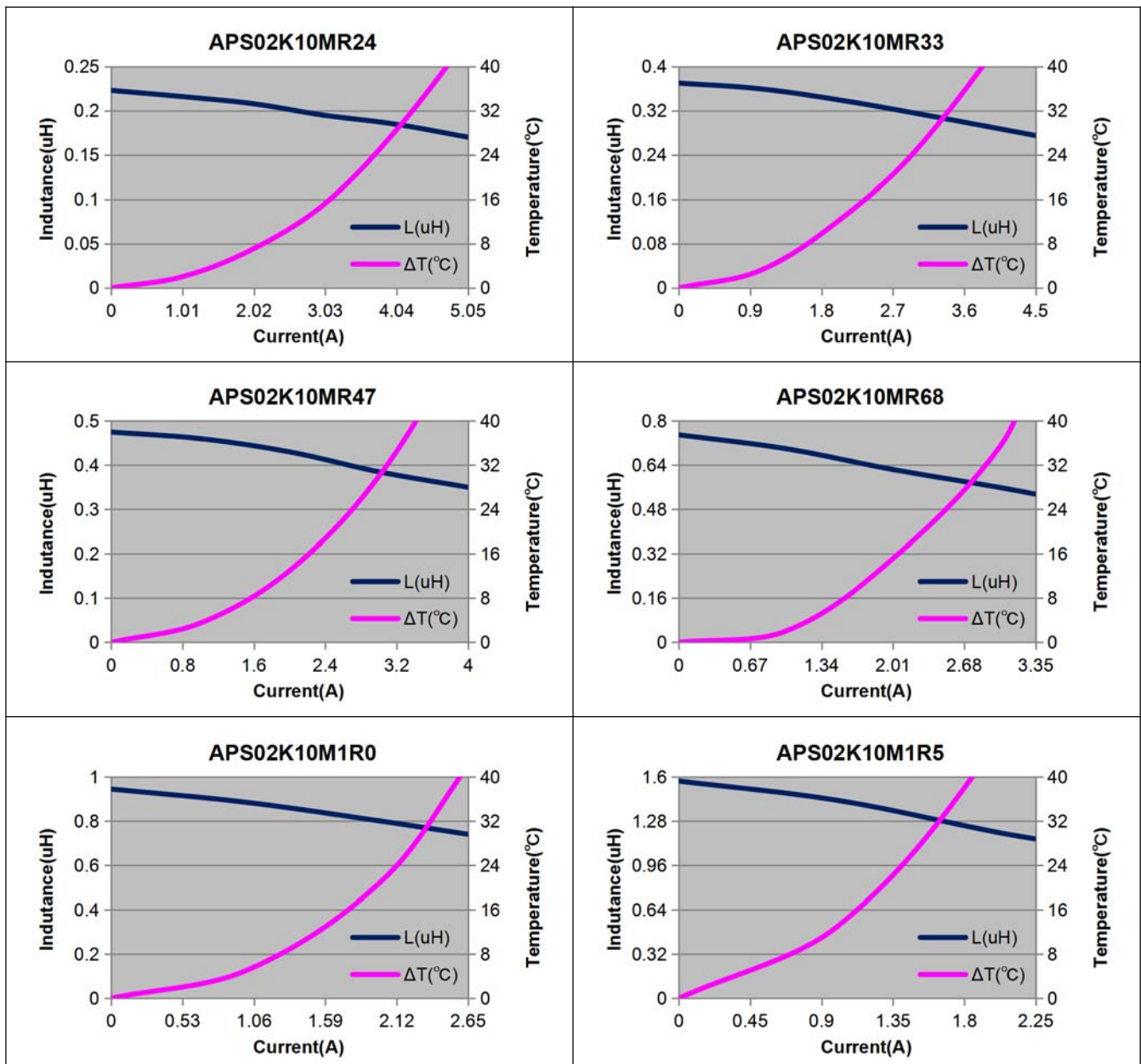
APS 02 K 10 M R24
 A B C D E F

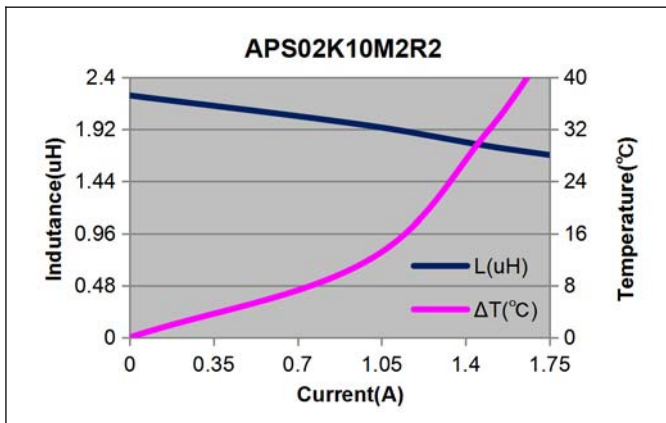
A: Series Name Molding Power Inductors
 B: Dimensions(mm) 02 : 2.0 x 1.6
 C: Materials NO use
 D: Thickness(mm) 10 : 1.05 Max
 E: Tolerance M : ±20%
 F: Inductance R24=0.24uH

Electrical Characteristics

Part Number	Inductance (uH) @1MHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)	Saturation Current Isat (A)
APS02K10MR24	0.24	21.0	4.50	5.05
APS02K10MR33	0.33	29.0	3.69	4.50
APS02K10MR47	0.47	40.0	3.15	4.00
APS02K10MR68	0.68	49.0	3.06	3.33
APS02K10M1R0	1.0	69.0	2.26	2.61
APS02K10M1R5	1.5	129.0	1.81	2.25
APS02K10M2R2	2.2	150.0	1.50	1.71

Curve:

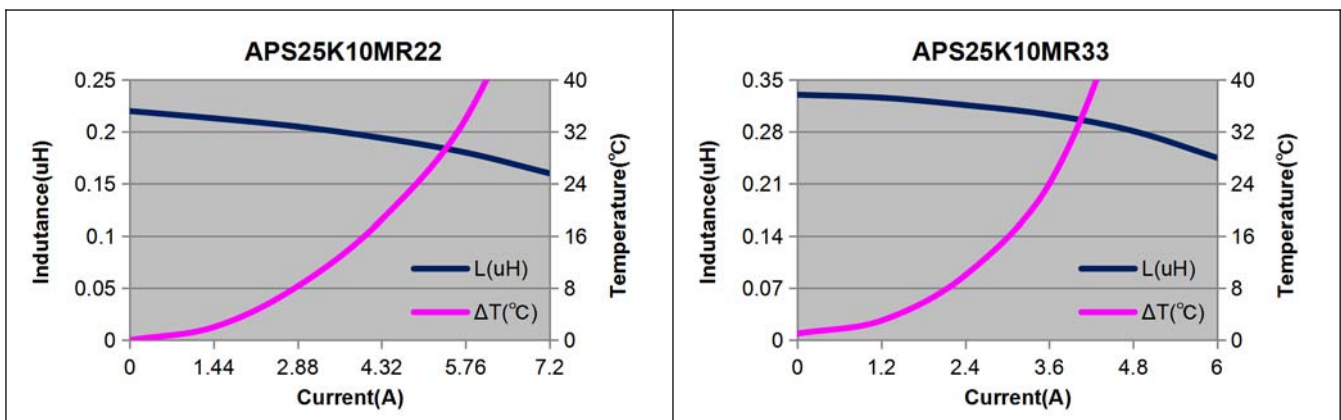


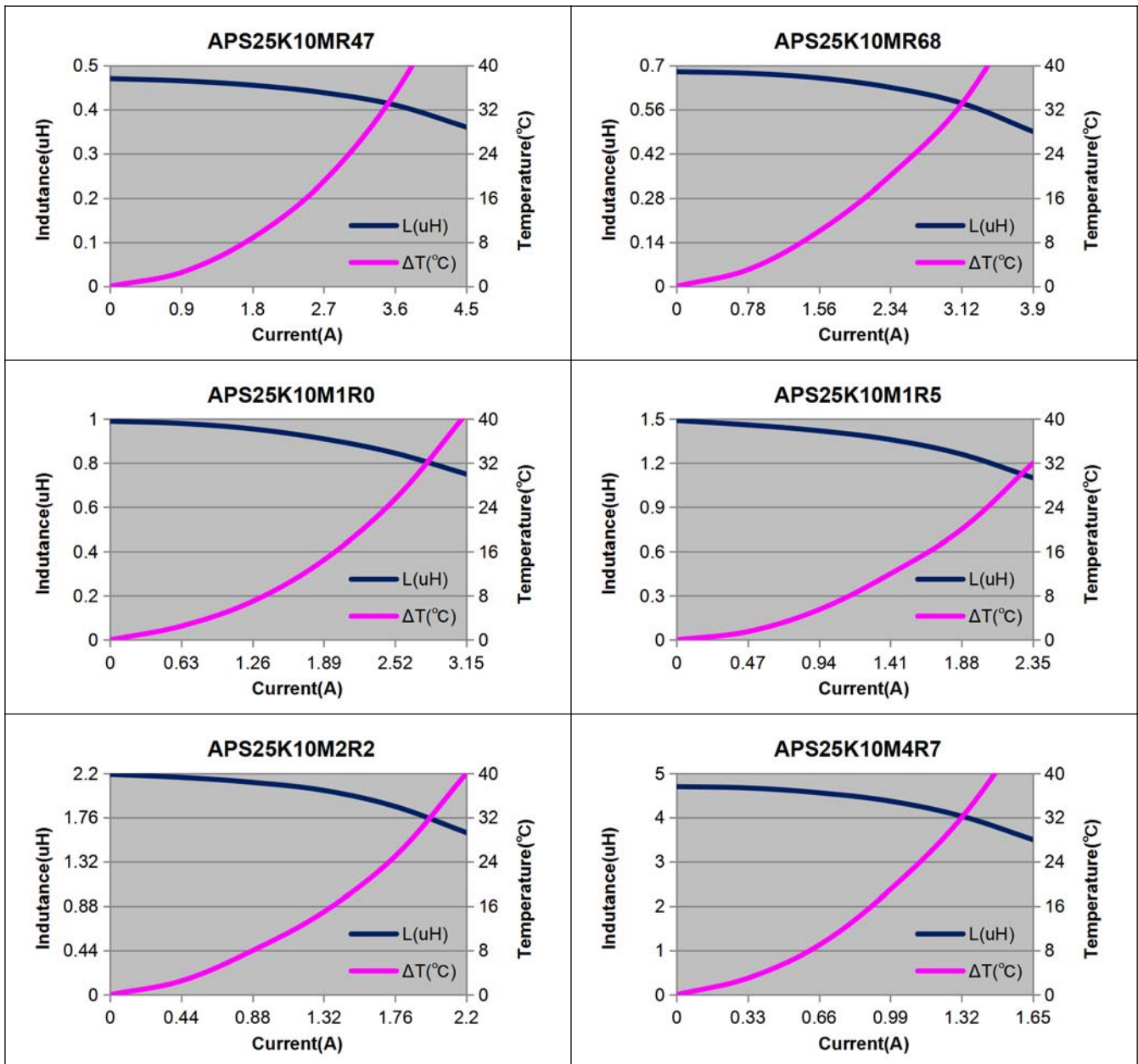


Electrical Characteristics

Part Number	Inductance (uH) @1MHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)	Saturation Current Isat (A)
APS25K10MR22	0.22	12.5	5.30	7.20
APS25K10MR33	0.33	26.0	4.00	6.00
APS25K10MR47	0.47	32.0	3.51	4.50
APS25K10MR68	0.68	44.0	3.06	3.87
APS25K10M1R0	1.0	54.0	2.70	3.15
APS25K10M1R5	1.5	91.0	2.25	2.34
APS25K10M2R2	2.2	119.0	2.07	2.16
APS25K10M4R7	4.7	262.0	1.22	1.62

Curve:

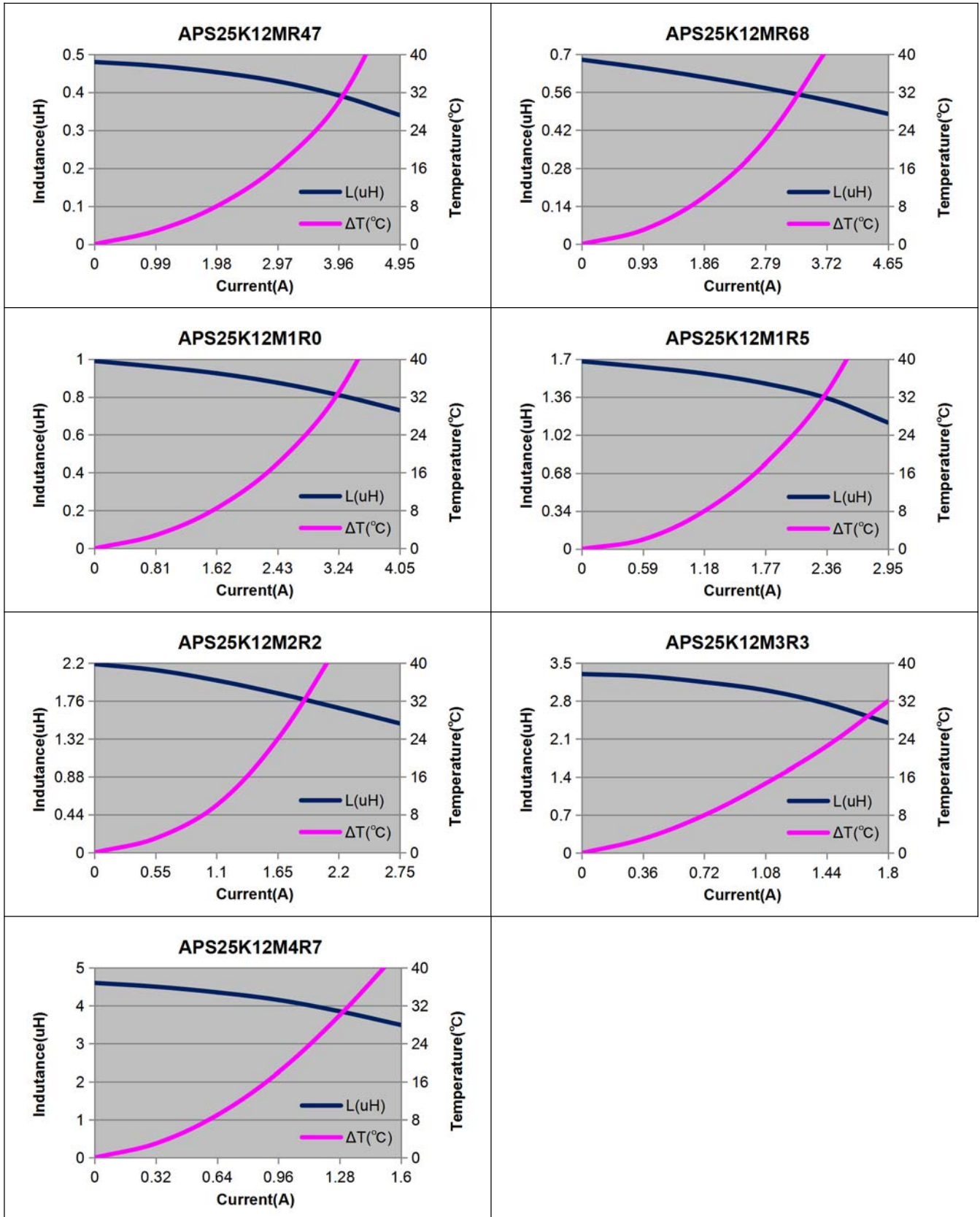




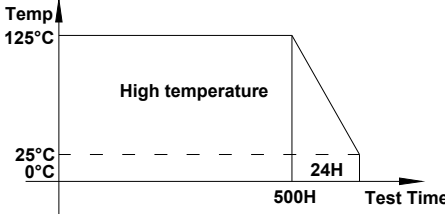
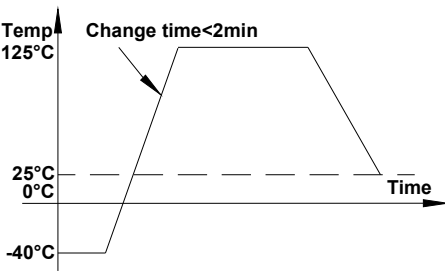
Electrical Characteristics

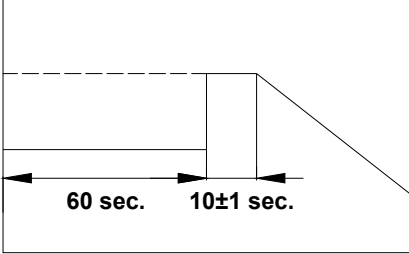
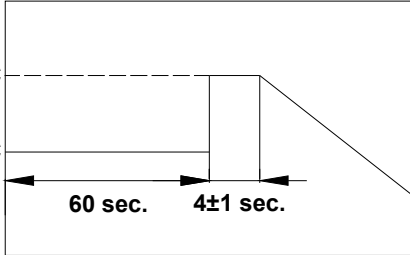
Part Number	Inductance (uH) @1MHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)	Saturation Current Isat (A)
APS25K12MR47	0.47	25.0	4.18	4.95
APS25K12MR68	0.68	35.0	3.36	4.63
APS25K12M1R0	1.0	49.0	3.18	4.04
APS25K12M1R5	1.5	77.0	2.27	2.91
APS25K12M2R2	2.2	98.0	2.06	2.73
APS25K12M3R3	3.3	150.0	1.80	1.80
APS25K12M4R7	4.7	235.0	1.40	1.58

Curve:



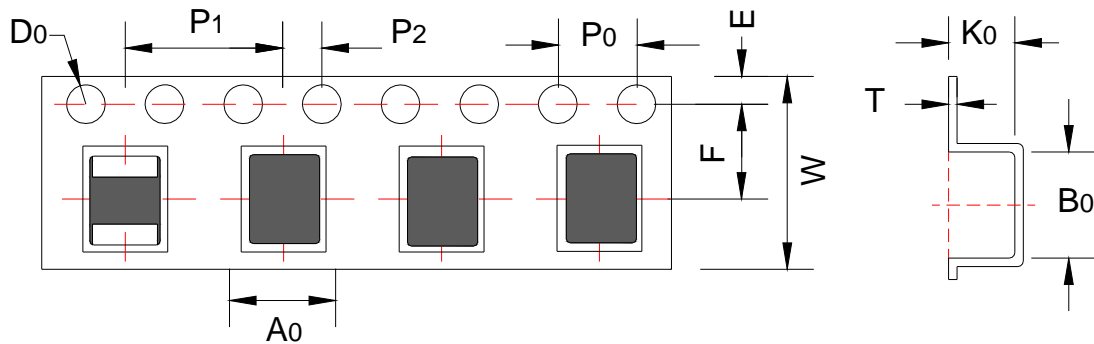
Reliability Test

Item	Specifications	Test conditions
High temperature storage test	No visible mechanical damage. Inductance change: Within $\pm 10\%$.	<p>Temperature: $125 \pm 2^\circ\text{C}$. Duration: 500hrs. Measured at room temperature after placing for 24 ± 4 hrs.</p> 
Temperature cycling test	No visible mechanical damage. Inductance change: Within $\pm 10\%$.	<p>Condition for 1 cycle. Step1: $-40 \pm 2^\circ\text{C}$ 30min Min. Step2: $125 \pm 2^\circ\text{C}$, transition time 2min Max. Step3: $125 \pm 2^\circ\text{C}$ 30min Min. Step4: Low temp, transition time 2min Max. Number of cycles: 100. Measured at room temperature after placing for 24 ± 4 hrs.</p> 
Biased humidity test	No visible mechanical damage. Inductance change: Within $\pm 10\%$.	<p>Humidity : $85\% \pm 3$ RH. Temperature: $85^\circ\text{C} \pm 2^\circ\text{C}$. Duration : 500hrs. Measured at room temperature after placing for 24 ± 4 hrs.</p>
Operational life test	No visible mechanical damage. Inductance change: Within $\pm 10\%$.	<p>Temperature: $105 \pm 2^\circ\text{C}$. Duration : 500hrs. Measured at room temperature after placing for 24 ± 4 hrs.</p>
Resistance to solvent test	No visible mechanical damage. Inductance change: Within $\pm 10\%$.	Add aqueous wash chemical - OKEM clean or equivalent.
Vibration test	No visible mechanical damage. Inductance change: Within $\pm 10\%$.	The sample shall be soldered onto the printed circuit board and when a vibration having an amplitude of 1.52mm and a frequency of from 10 to 55Hz/1 minute repeated should be applied to the 3 directions (X,Y,Z) for 2 hours each.(A total of 6 hours)

Item	Specifications	Test conditions
Resistance to soldering heat test	No visible mechanical damage. Inductance change: Within $\pm 10\%$.	<p>Temperature ($^{\circ}\text{C}$): 260 ± 5 (solder temp). Time (s): 10 ± 1. ramp/immersion and emersion rate: $25\text{mm/s} \pm 6 \text{ mm/s}$. Number of heat cycles:1.</p> 
Solderability test	More than 95% of the terminal electrode should be covered with solder.	<p>Steam Aging: 8 hours \pm 15 min. Preheat: 150°C, 60sec. Solder: Sn99.5%-Cu0. 5%. Temperature: $245 \pm 5^{\circ}\text{C}$. Flux for lead free: Rosin. 9.5%. Dip time: 4 ± 1sec. Depth: completely cover the termination.</p> 
Terminal strength (SMD) test	No visible mechanical damage.	<p>With the component mounted on a PCB with the device to be tested, apply a 10 N force to the side of a device being tested. This force shall be applied for 10 ± 1 seconds. Also the force shall be applied radually as not to apply a shock to the component being tested.</p>

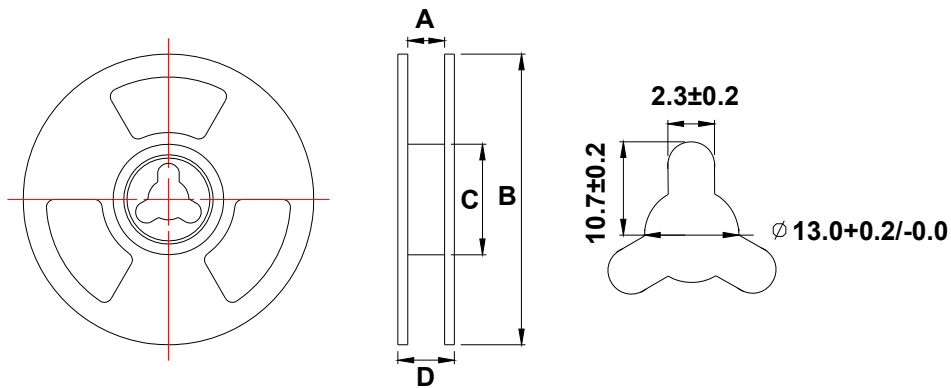
Packaging

Taping Dimensions (Unit: mm)



TYPE	A0	B0	W	E	F	P0	P1	P2	D0	T	K0
APS02K10	1.82±0.1	2.23±0.1	8.0±0.3	1.75±0.1	3.5±0.1	4.0±0.1	4.0±0.1	2.0±0.1	1.5±0.1	0.22±0.1	1.15±0.1
APS25K10	2.25±0.1	2.8±0.1	8.0±0.3	1.75±0.1	3.5±0.1	4.0±0.1	4.0±0.1	2.0±0.1	1.5±0.1	0.22±0.1	1.35±0.1
APS25K12	2.25±0.1	2.8±0.1	8.0±0.3	1.75±0.1	3.5±0.1	4.0±0.1	4.0±0.1	2.0±0.1	1.5±0.1	0.22±0.1	1.35±0.1

Reel Dimensions (Unit: mm)

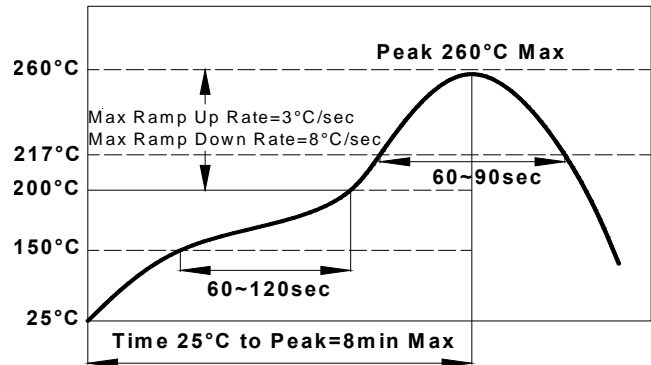


TYPE	A	B	C	D
APS02K10	9.0±2.0	178.0±2.0	60.0±2.0	12.0±2.0
APS25K10	9.0±2.0	178.0±2.0	60.0±2.0	12.0±2.0
APS25K12	9.0±2.0	178.0±2.0	60.0±2.0	12.0±2.0

Recommended Soldering Technologies

Re-flowing Profile:

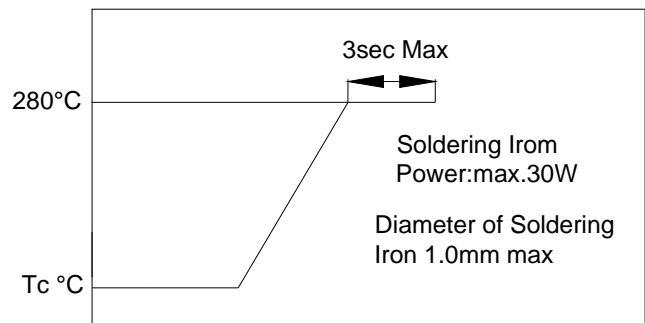
- △ Preheat condition: 150~200°C/60~120sec.
- △ Allowed time above 217°C: 60~90sec.
- △ Max temp: 260°C
- △ Max time at max temp: 5sec.
- △ Solder paste: Sn/3.0Ag/0.5Cu
- △ Allowed Reflow time: 2x max



Iron Soldering Profile:

- △ Iron soldering power: Max.30W
- △ Pre-heating: 150°C/60sec.
- △ Soldering Tip temperature: 280°C Max.
- △ Soldering time: 3sec Max.
- △ Solder paste: Sn/3.0Ag/0.5Cu
- △ Max.1 times for iron soldering

[Note: Take care not to apply the tip of the soldering iron to the]



单击下面可查看定价，库存，交付和生命周期等信息

[>>Coilank\(驰兴\)](#)