## Providence Electronics Corp.



## HIGH CURRENT INDUCTORS

## MODEL NO. : SHI-115060DD SERIES

#### Features:

- \* SMD version.
- \* Low core loss and high efficiency performance.
- \* High saturation currents up to 120Amp.
- \* Close magnetic path for low leakage flux.
- \* Low DCR with flat wire design.
- \* Compliant with RoHS and Halogen free.



## **Application:**

- \* DC/DC converter in power regulation system.
- \* Routers. \*Solar energy.

## **Electrical Specification:**

INDUCTANCE (uH) ±20% @0 ADC	DCR ±10% (mΩ)	TEMPERATURE RISE CURRENT (ADC)		SATURATION CURRENT (ADC)	SRF (MHZ)
		<b>ΔT:20℃</b>	ΔT:40℃	(NOTE 2)	Тур
0.18	0.50	28.8	46.0	120	68
0.40	0.73	25.9	36.8	82	60
0.68	1.31	22.4	33.9	52	51
1.2	2.25	17.9	26.3	43	44
1.5	2.75	16.0	24.4	36	36
2.2	4.20	13.9	20.0	32	25
3.3	6.70	11.2	16.8	26	19
4.7	9.70	8.5	14.0	25	16
	(uH) ±20% @0 ADC  0.18  0.40  0.68  1.2  1.5  2.2  3.3  4.7	(uH) ±20% (mΩ)  0.18 0.50 0.40 0.73 0.68 1.31 1.2 2.25 1.5 2.75 2.2 4.20 3.3 6.70 4.7 9.70	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

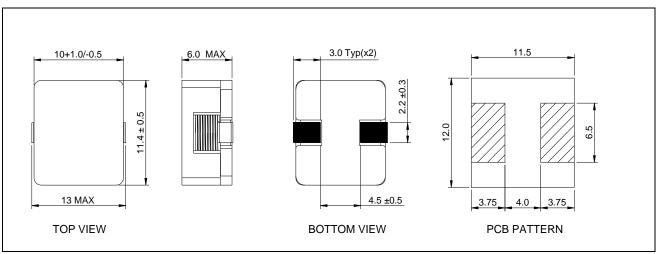
#### Temperature Rise Current Testing :

The testing was performed on 0.75 inch wide x 0.25 inch thick Copper traces in still air.

Temperature rise is highly dependent on many factors Including pcb pattern, trace size and proximity to other components. Therefore temperature rise should be verified in application conditions.

- NOTE(1): Measuring condition : 1.0 MHZ, 0.1Vrms.
- NOTE(2): The saturation current indicates the value of DC current is approximately 30% lower than its initial value of inductance.
- NOTE(3): Operating temperature range:  $-40^{\circ}$ C ~  $+125^{\circ}$ C.
- NOTE(4): Storage time: The recommended storage time of Inductor is maximum 12 months, and don't suggest to use the parts over 12 months.

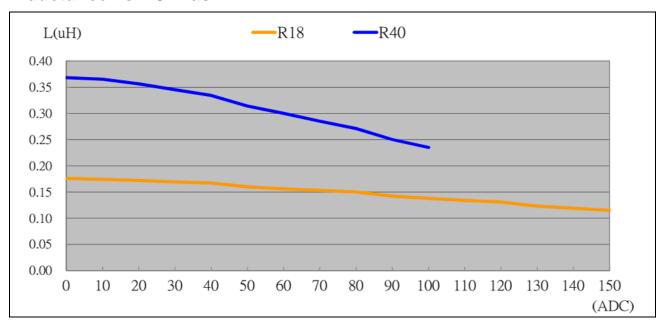
## Physical Dimension: (unit:mm)

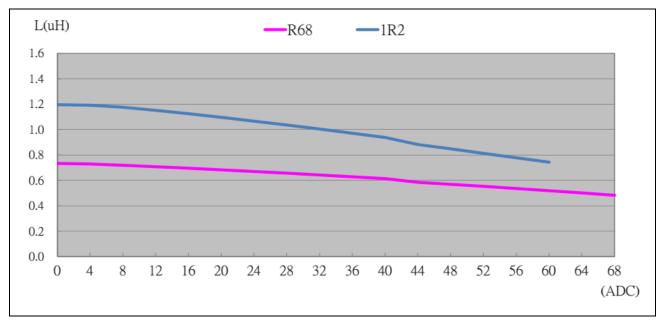


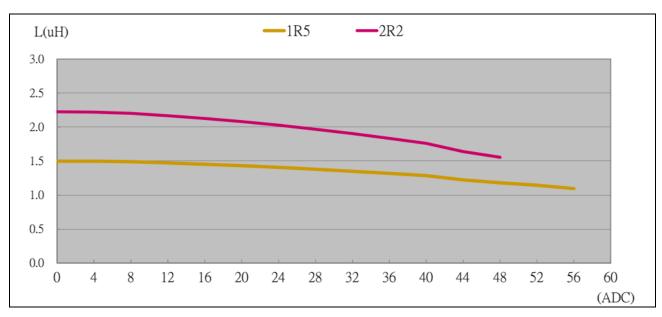


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### Inductance vs DC Bias:

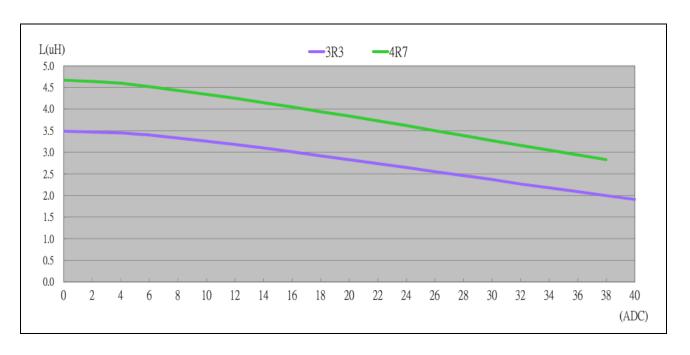








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#### **PACKAGING SPEC:**

- 1. REEL SIZE & UNITS PER REEL :13",600PCS.
- 2. TAPE WIDTH:24mm.
- 3. REEL WIDTH:29.5mm.
- 4. COMPONENT PITCH:16mm.
- 5. Weight: 4.0 g / pcs typ.