

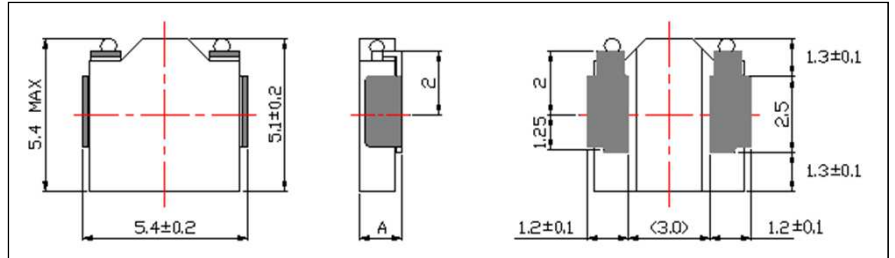
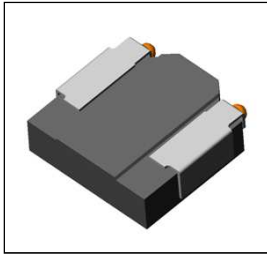


# LY

## SMD Metal Alloy Power Inductors 電源回路用薄型金屬合金功率電感

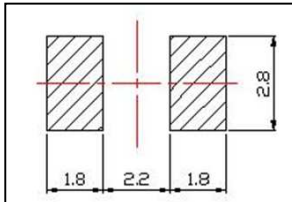
Inductance Range :	0.47 ~ 6.8	μH ( SMF 0512 )
使用電感範圍	0.47 ~ 10.0	μH ( SMF 0515 )
	0.68 ~ 10.0	μH ( SMF 0518 )
	0.15 ~ 4.7	μH ( SMF 0520 )

### Dimensions 外型與尺寸



A = 0512 : 1.2 mm Max. / 0515 : 1.5 mm Max. / 0518 : 1.8 mm Max. / 0520 : 2.0 mm Max.

### Recommended Patterns 推薦焊盤尺寸



### Features : 特點

- Small and thickness 5.4 X 5.4 mm Square and 1.2 / 1.5 / 1.8 / 2.0 mm Max. height .
- Magnetically shielded construction, low DC resistance .
- Using high saturating flux density magnetic iron powder ensure capability for large current .
- High Curie's Temp. for wider function Temp. .
- Low audible core noise .
- Ideal for DC-DC converter applications .
- RoHS compliant. Halogen Free .
- 小型薄形 : 5.4 X 5.4 mm 的平面, 最大高度 1.2 / 1.5 / 1.8 / 2.0 mm .
- 磁性屏蔽結構, 低直流電阻 .
- 使用高飽和磁束密度合金系磁性粉, 可保證大電流 .
- 居里溫度高, 動作溫度範圍廣 .
- 低芯片噪音 .
- DC-DC 轉換器電感器的理想選擇 .
- 符合 RoHS 指令, 無鹵素 .

### Using : 用途

Smartphones (智慧手機), Note Book (個人平板電腦), Others (其他)

### Part Numbers : 品名稱呼

SMF 0512 T - 1R0 - M

(1) (2) (3) (4) (5)

- (1) Part Numbers (系列名) : SMF-扁線
- (2) Dimensions (尺寸 L\*H) : 0512 - 5.4 \* 1.2 mm Max.
- (3) Packing (包裝方式) : T - Carrier Tape (承載膠帶)
- (4) Inductance Value (電感值) : 1R0 - 1.0 μH
- (5) Inductance Tolerance (電感值公差) : M = ± 20%

**LY****SMD Metal Alloy Power Inductors**  
**電源回路用薄型金屬合金功率電感**

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**LY Standard Part Numbers : 龍翌標準品名****TYPE SMF 0512 (Quantity / Reel : 4000 PCS)**

龍翌品名號碼	電感值 ①	公差	最大直流電阻 ②		最大電感減小電流 ③		最大溫度上昇電流 ④	
LY Part Numbers	Inductance ① ( $\mu$ H)	Tolerance (%)	DC Resistance ② (m $\Omega$ )		Inductance Decrease current ③ $\Delta L/L=30\%$		Temperature Rise Current ④ $\Delta T=40^{\circ}\text{C}$	
			Typical	Maximum	Typical	Maximum	Typical	Maximum
SMF 0512T-R47M	0.47	$\pm 20\%$	12.8	14.9	9.9	8.9	8.3	7.5
SMF 0512T-R68M	0.68	$\pm 20\%$	17.1	19.8	9.6	8.6	6.8	6.1
SMF 0512T-1R0M	1.0	$\pm 20\%$	20.0	23.0	7.0	6.3	6.5	5.9
SMF 0512T-1R5M	1.5	$\pm 20\%$	37.6	43.6	6.6	5.9	4.2	3.8
SMF 0512T-2R2M	2.2	$\pm 20\%$	49.2	57.0	6.0	5.4	3.8	3.3
SMF 0512T-3R3M	3.3	$\pm 20\%$	85.6	99.1	5.0	4.5	2.8	2.4
SMF 0512T-4R7M	4.7	$\pm 20\%$	108.0	125.0	3.7	3.3	2.7	2.3
SMF 0512T-6R8M	6.8	$\pm 20\%$	149.0	173.0	3.0	2.6	2.1	1.8

**TYPE SMF 0515 (Quantity / Reel : 3000 PCS)**

龍翌品名號碼	電感值 ①	公差	最大直流電阻 ②		最大電感減小電流 ③		最大溫度上昇電流 ④	
LY Part Numbers	Inductance ① ( $\mu$ H)	Tolerance (%)	DC Resistance ② (m $\Omega$ )		Inductance Decrease current ③ $\Delta L/L=30\%$		Temperature Rise Current ④ $\Delta T=40^{\circ}\text{C}$	
			Typical	Maximum	Typical	Maximum	Typical	Maximum
SMF 0515T-R47M	0.47	$\pm 20\%$	12.2	14.1	14.5	13.1	7.7	6.9
SMF 0515T-1R0M	1.0	$\pm 20\%$	18.0	21.0	10.5	9.5	6.6	5.9
SMF 0515T-1R5M	1.5	$\pm 20\%$	21.0	25.0	7.6	6.8	6.2	5.5
SMF 0515T-2R2M	2.2	$\pm 20\%$	34.0	40.0	6.6	5.9	4.7	4.2
SMF 0515T-3R3M	3.3	$\pm 20\%$	65.0	75.0	5.8	5.2	3.3	3.0
SMF 0515T-4R7M	4.7	$\pm 20\%$	70.0	84.0	4.6	4.1	3.2	2.9
SMF 0515T-6R8M	6.8	$\pm 20\%$	124.0	144.0	3.3	2.9	2.3	2.0
SMF 0515T-100M	10.0	$\pm 20\%$	154.0	179.0	2.8	2.5	2.0	1.8

**TYPE SMF 0518 (Quantity / Reel : 2500 PCS)**

龍翌品名號碼	電感值 ①	公差	最大直流電阻 ②		最大電感減小電流 ③		最大溫度上昇電流 ④	
LY Part Numbers	Inductance ① ( $\mu$ H)	Tolerance (%)	DC Resistance ② (m $\Omega$ )		Inductance Decrease current ③ $\Delta L/L=30\%$		Temperature Rise Current ④ $\Delta T=40^{\circ}\text{C}$	
			Typical	Maximum	Typical	Maximum	Typical	Maximum
SMF 0518T-R68M	0.68	$\pm 20\%$	9.6	11.1	14.0	12.6	9.2	8.3
SMF 0518T-1R0M	1.0	$\pm 20\%$	11.9	13.8	11.6	10.4	8.3	7.4
SMF 0518T-1R5M	1.5	$\pm 20\%$	20.1	23.3	9.5	8.5	6.2	5.5
SMF 0518T-2R2M	2.2	$\pm 20\%$	23.1	26.7	7.5	6.7	6.0	5.4
SMF 0518T-3R3M	3.3	$\pm 20\%$	39.0	45.2	6.0	5.4	4.5	4.0
SMF 0518T-4R7M	4.7	$\pm 20\%$	51.6	59.7	5.2	4.6	3.8	3.4
SMF 0518T-6R8M	6.8	$\pm 20\%$	77.0	89.2	4.3	3.8	3.0	2.7
SMF 0518T-100M	10.0	$\pm 20\%$	142.7	165.2	3.3	2.8	2.2	2.0

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**LY Standard Part Numbers : 龍翌標準品名**

TYPE SMF 0520 (Quantity / Reel : 2500 PCS)

龍翌品名號碼	電感值 ①	公差	最大直流電阻 ②		最大電感減小電流 ③		最大溫度上昇電流 ④	
LY Part Numbers	Inductance ① (μH)	Tolerance (%)	DC Resistance ② (mΩ)		Inductance Decrease current ③ ΔL/L=30%		Temperature Rise Current ④ ΔT=40°C	
			Typical	Maximum	Typical	Maximum	Typical	Maximum
SMF 0520T-R15M	0.15	±20%	3.7	4.3	29.0	26.1	15.5	14.0
SMF 0520T-R47M	0.47	±20%	7.4	8.9	17.5	15.8	10.8	9.7
SMF 0520T-1R0M	1.0	±20%	15.7	18.2	12.0	10.8	7.5	6.8
SMF 0520T-1R2M	1.2	±20%	14.3	16.5	11.0	9.9	7.9	7.1
SMF 0520T-2R2M	2.2	±20%	23.5	28.0	8.1	7.3	5.7	5.1
SMF 0520T-3R3M	3.3	±20%	44.0	51.0	6.1	5.5	4.2	3.7
SMF 0520T-4R7M	4.7	±20%	46.0	56.0	5.2	4.6	4.1	3.6

① Inductance is measured with a LCR meter E4980A (Agilent Technologies) or equivalent. Test frequency at 100kHz.

② DC resistance is measured with 16502 Milliohm Meter. (Chroma Technologies) (Reference ambient temperature 25°C )

③ Inductance decrease current based upon 30% inductance reduction ( Approximately transient current ) from the initial value. Inductance decrease current is measured with 3302 Automatic Component Analyzer and 1320 Bias Current Source. (Chroma Technologies)

④ Temperature rise current based upon 40°C temperature rise. (Reference ambient temperature 25°C )

⑤ Operating temperature range -40°C to +125°C

① 電感值是以LCR儀表E4980A (Agilent技術) 或者相同功能儀器在100kHz下測試。

② 直流電阻值是通過毫歐姆表16502 (Chroma技術)測得。(測試環境溫度為25°C)。

③ 電感值降低電流是基於電感值從最初的值降低30%計算。(瞬間電流) 電感值降低電流是以3302自動零件分析儀和1320直流重疊電流源測得。(Chroma技術)

④ 溫度升高電流是基於溫度上昇40°C 的基礎上衡量的(測試環境溫度為25°C)。

⑤ 動作溫度範圍是-40°C ~ +125°C

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