



## High Current Power Inductors - SEP6050EX SERIES



### PART NUMBERING SYSTEM

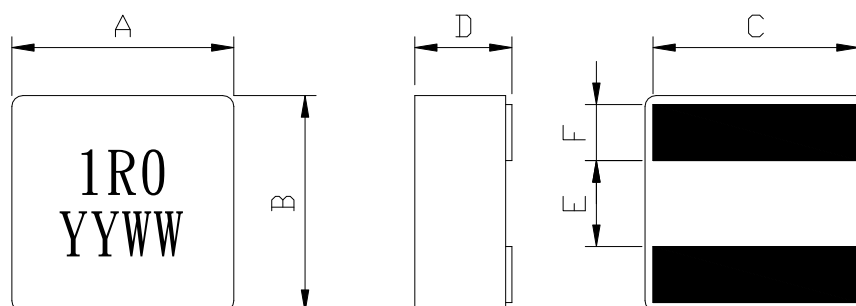
<b>SEP</b>	<b>6050EX</b>	—	<b>2R2M</b>	—	<b>LF</b>
TYPE	DIMENSIONS		INDUCTANCE		LEAD FREE

### FEATURES :

- Excellent current handling – up to 24.0 A; Exceptionally low DCR – only 3.80 mOhms
- Inductance range: 0.82 μH – 8.2 μH
- Magnetically shielded and low DC resistance and Suitable for large current .
- Excellent temperature stability for inductance and saturation with AEC-Q200 Grade 1 (–40°C to +125°C) .

### SHAPES AND DIMENSIONS :

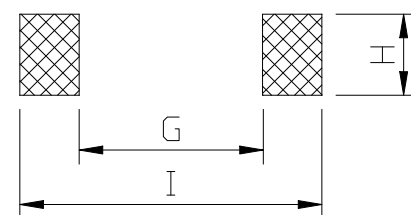
UNIT : mm



A=7.2±0.2 B=6.9±0.2 C=See Spec table D=4.8±0.2 E=2.6±0.25 F= 1.4±0.2

### RECOMMENDED PATTERNS

UNIT : mm



H=5.60 G= 2.50 I = 5.60

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### SPECIFICATION TABLE

PART NUMBER	INDUCTANCE (μH)	I <sub>sat</sub> ( A ) Typ.(Max.)	I <sub>rms</sub> (A)Typ. 20°C/40°C (Rise)	DCR (mΩ) Typ.(Max.)	C (mm) ±0.3mm
SEP6050EX-R82M-LF	0.82±20%	24.0(20.0)	16.0(21.0)	3.80(4.18)	5.30
SEP6050EX-1R0M-LF	1.0±20%	23.0(18.0)	15.0(20.0)	4.10(4.52)	5.30
SEP6050EX-1R2M-LF	1.2±20%	22.0(16.0)	14.0(18.0)	5.30(5.83)	5.30
SEP6050EX-1R5M-LF	1.5±20%	19.5(14.5)	13.0(17.0)	5.70(6.30)	5.30
SEP6050EX-1R8M-LF	1.8±20%	18.5(13.5)	12.0(16.0)	6.40(7.10)	5.30
SEP6050EX-2R2M-LF	2.2±20%	16.0(12.0)	10.0(13.0)	7.70(8.50)	5.20
SEP6050EX-3R3M-LF	3.3±20%	12.5(10.0)	8.50(11.0)	11.2(12.5)	5.20
SEP6050EX-4R3M-LF	4.3±20%	11.0(8.50)	7.00(9.00)	15.1(16.2)	5.20
SEP6050EX-4R7M-LF	4.7±20%	10.5(8.00)	6.50(8.50)	16.7(18.4)	5.20
SEP6050EX-5R6M-LF	5.6±20%	10.0(8.30)	5.70(7.00)	20.0(22.0)	5.20
SEP6050EX-6R8M-LF	6.8±20%	9.00(7.00)	5.20(6.60)	23.1(25.4)	5.20
SEP6050EX-8R2M-LF	8.2±20%	8.00(6.80)	4.50(6.20)	28.6(31.5)	5.20

- I<sub>sat</sub> : DC current at which the inductance drops 30% (Max.) from its value without current.
- I<sub>rms</sub> : Average current for a 40°C temperature rise above 25°C ambient.
- Test Frequency at 100KHz / 0.1V
- Rated operating voltage(across inductor) 40V ref.
- The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- I<sub>rms</sub> Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
- Operating temperature range -40°C to +125°C , Electrical specifications at 25°C.