

# High Current Inductor



SIUC, a new construction design for better shielding



## FEATURES

- High current and precision Rdc
- Ferrite core
- RoHS, Halogen free and REACH compliance

## APPLICATION

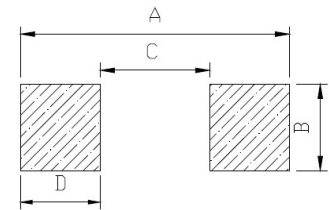
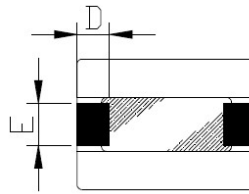
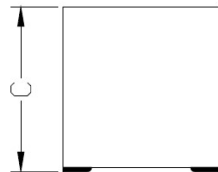
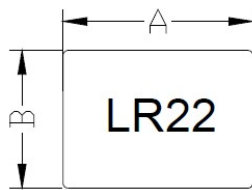
- Server, workstation and storage systems
- Desktop and notebook
- Graphics cards and battery power systems
- Multi-phase and Vcore regulators
- Voltage Regulator Modules (VRMs)
- Point-of-Load modules
- DCR Sensing circuits

## ENVIRONMENTAL DATA

- Storage temperature range: -40°C to +125°C
- Operating temperature range: -40°C to +125°C (ambient + self-temperature rise)
- Reflow soldering temperature: J-STD-020D compliance
- MSL level 1

## PACKAGING

- SIUC0706 : 500pcs/reel, 2000pcs/carton (Ref)
- SIUC0906 : 500pcs/reel, 2000pcs/carton (Ref)
- SIUC1007 : 400pcs/reel, 1600pcs/carton (Ref)
- SIUC0811 : 400pcs/reel, 1600pcs/carton (Ref)
- SIUC0812 : 350pcs/reel, 1400pcs/carton (Ref)



Dimension (Unit:mm):

Recommended Land Pattern (Unit:mm):

SERIES	A ±0.3	B ±0.3	C Max	D ±0.3	E ±0.3
SIUC0706	7.5	6.2	10.0	1.25	2.3
SIUC0906	9.5	6.2	10.0	2.6	2.3
SIUC1007	10.0	7.0	10.0	2.5	2.3
SIUC0811	11.0	8.0	10.5	1.8	3.2
SIUC0812	12.0	8.0	10.0	1.8	7.7

A ref	B ref	C ref	D ref
8.5	2.8	4.9	1.8
10.5	2.9	3.3	3.6
11.6	2.9	4.8	3.4
11.8	3.9	5.8	3.0
12.8	8.6	6.0	3.4

## 0706 SERIES

Part Number	Inductance/μH ±20%	Rdc/mOhms ±10%	Isat/A Δ L-30%(typ)		Irms/A Δ T+40°C (typ)
			T <sub>amb</sub> =25°C	T <sub>amb</sub> =125°C	T <sub>amb</sub> =25°C
SIUC0706-R10M-XXXX	0.10	0.25	90	67.5	40
SIUC0706-R12M-XXXX	0.12	0.25	75	56	40
SIUC0706-R15M-XXXX	0.15	0.25	60	45	40
SIUC0706-R22M-XXXX	0.22	0.25	40	30	40

**■ 0906 SERIES**

Part Number	Inductance/ $\mu$ H	Rdc/mOhms	Isat/A		Irms/A
			$\Delta$ L-30%(typ)		$\Delta$ T+40 $^{\circ}$ C (typ)
	$\pm$ 20%	$\pm$ 10%	T <sub>amb</sub> =25 $^{\circ}$ C	T <sub>amb</sub> =125 $^{\circ}$ C	T <sub>amb</sub> =25 $^{\circ}$ C
SIUC0906-R10M-XXXX	0.10	0.17	100	75	60
SIUC0906-R12M-XXXX	0.12	0.17	95	70	60
SIUC0906-R15M-XXXX	0.15	0.17	80	60	60
SIUC0906-R18M-XXXX	0.18	0.17	60	45	60
SIUC0906-R22M-XXXX	0.22	0.17	50	37.5	60
SIUC0906-R30M-XXXX	0.30	0.17	28	21	60

**■ 1007 SERIES**

Part Number	Inductance/ $\mu$ H	Rdc/mOhms	Isat/A		Irms/A
			$\Delta$ L-30%(typ)		$\Delta$ T+40 $^{\circ}$ C (typ)
	$\pm$ 20%	$\pm$ 10%	T <sub>amb</sub> =25 $^{\circ}$ C	T <sub>amb</sub> =125 $^{\circ}$ C	T <sub>amb</sub> =25 $^{\circ}$ C
SIUC1007-R12M-XXXX	0.12	0.43	100	75	50
SIUC1007-R15M-XXXX	0.15	0.43	90	67.5	50
SIUC1007-R22M-XXXX	0.22	0.43	65	48	50
SIUC1007-R30M-XXXX	0.30	0.43	45	34	50
SIUC1007-R36M-XXXX	0.36	0.43	40	30	50

**■ 0811 SERIES**

Part Number	Inductance/ $\mu$ H	Rdc/mOhms	Isat/A		Irms/A
			$\Delta$ L-30%(typ)		$\Delta$ T+40 $^{\circ}$ C (typ)
	$\pm$ 20%	$\pm$ 10%	T <sub>amb</sub> =25 $^{\circ}$ C	T <sub>amb</sub> =125 $^{\circ}$ C	T <sub>amb</sub> =25 $^{\circ}$ C
SIUC0811-R12M-XXXX	0.12	0.52	100	75	50
SIUC0811-R15M-XXXX	0.15	0.52	90	67.5	50
SIUC0811-R22M-XXXX	0.22	0.52	70	53	50
SIUC0811-R30M-XXXX	0.30	0.52	55	40	50
SIUC0811-R36M-XXXX	0.36	0.52	45	30	50
SIUC0811-R44M-XXXX	0.44	0.52	35	25	50

**■ 0812 SERIES**

Part Number	Inductance/ $\mu$ H	Rdc/mOhms	Isat/A		Irms/A
			$\Delta L-30\%$ (typ)		$\Delta T+40^{\circ}\text{C}$ (typ)
	$\pm 20\%$	$\pm 10\%$	$T_{\text{amb}}=25^{\circ}\text{C}$	$T_{\text{amb}}=125^{\circ}\text{C}$	$T_{\text{amb}}=25^{\circ}\text{C}$
SIUC0812-R12M-XXXX	0.12	0.55	100	75	50
SIUC0812-R15M-XXXX	0.15	0.55	100	75	50
SIUC0812-R25M-XXXX	0.25	0.55	80	60	50
SIUC0812-R30M-XXXX	0.30	0.55	65	48	50
SIUC0812-R36M-XXXX	0.36	0.55	55	40	50
SIUC0812-R47M-XXXX	0.47	0.55	45	34	50

- Inductance is measured with a LCR meter E4980AL (Agilent technologies) or equivalent at 100KHz, 1Vrms, 0Adc, 25°C.
- DC resistance is measured with 16502 miliohmmeter (Reference ambient temperature 25°C).
- Inductance decrease current is measured with 3302 automatic component analyzer and 1320 bias current source (Chroma technologies)
- IRMS: The current will cause self-temperature rise approximately 40°C.
- ISAT: The current will cause  $L_0$  to drop approximately 30%.

**APPLICATION NOTES:**

- Shelf storing temperature  $-5^{\circ}\text{C}\sim+40^{\circ}\text{C}$ , Humidity 20% to 70%RH, keep away from chemical, dust, acid gas like sulfide & chloride gas and avoid expose direct to sunlight.

**NOTICES:**

- Product characteristics and tolerance can be adjusted per request. Others size and inductance is available for inquiry. Specifications are subject to change without notice. Please contact our sale for latest information.
- These products are not designed for use in applications where any failure or malfunction may resulted in personal injury, death or severe property or environmental damage such as medical, military, aircraft, space or life support equipment.