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What is "Embedded - Microcontrollers"?

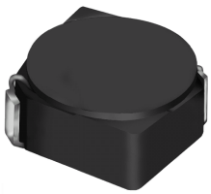
"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "Embedded - Microcontrollers"

Details	
Product Status	Active
Core Processor	AVR
Core Size	8-Bit
Speed	12MHz
Connectivity	UART/USART
Peripherals	POR, PWM, WDT
Number of I/O	12
Program Memory Size	1KB (1K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	32 x 8
Voltage - Supply (Vcc/Vdd)	1.8V ~ 5.5V
Data Converters	A/D 8x10b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 105°C (TA)
Mounting Type	Surface Mount
Package / Case	14-SOIC (0.154", 3.90mm Width)
Supplier Device Package	14-SOIC
Purchase URL	https://www.e-xfl.com/product-detail/microchip-technology/attiny104f-ssnr

SMD Power Inductor
CDRH4D28

RoHS



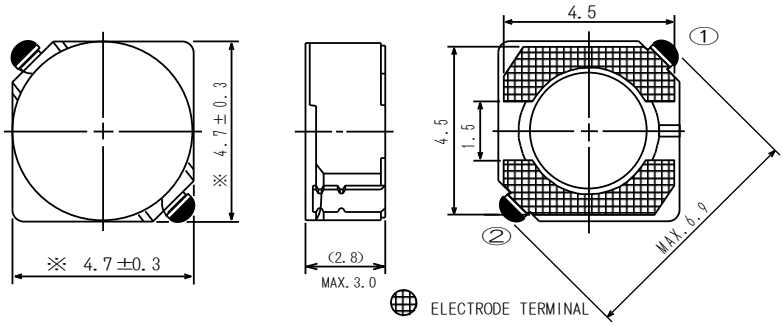
Description
- Ferrite drum core construction.
- Magnetically shielded.
- L × W × H:5.0 × 5.0 × 3.0 mm Max.
- Product weight: 0.2g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

Environmental Data
- Operating temperature range: -40℃~+100℃ (including coil's self temperature rise)
- Storage temperature range: -40℃～+100℃
- Solder reflow temperature: 260 ℃ peak.

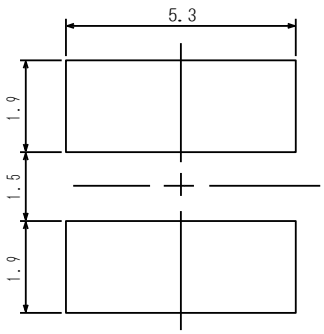
Packaging
- Carrier tape and reel packaging
- 12.9"diameter reel
- 2000pcs per reel

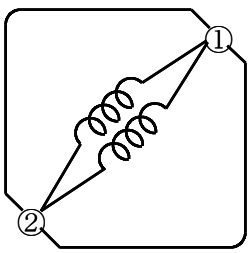
Applications
- Ideally used in Mobile phone,PDA,MP3,HDD, DSC/DVC, Note book PC, etc as DC-DC converter inductors.

Dimension - [mm]

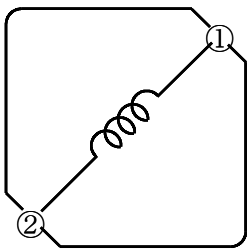


Land pattern and Schematics - [mm]





(1.2μH～8.2μH)



(10μH～180μH)

Revised: 9-Jan-17

Electrical Characteristics

Part No.	Stamp	Inductance (μH) [within] ※1	D.C.R.(Ω) Max. (Typ.) (at 20℃)	Rated Current (A) ※2
CDRH4D28NP-1R2NC	1R2	1.2±30%	23.6m(17.5m)	2.56
CDRH4D28NP-1R8NC	1R8	1.8±30%	27.5m(20.4m)	2.20
CDRH4D28NP-2R2NC	2R2	2.2±30%	31.3m(23.2m)	2.04
CDRH4D28NP-2R7NC	2R7	2.7±30%	43.3m(32.1m)	1.60
CDRH4D28NP-3R3NC	3R3	3.3±30%	49.2m(36.4m)	1.57
CDRH4D28NP-3R9NC	3R9	3.9±30%	64.8m(48.0m)	1.44
CDRH4D28NP-4R7NC	4R7	4.7±30%	72.0m(53.3m)	1.32
CDRH4D28NP-5R6NC	5R6	5.6±30%	100.9m(74.7m)	1.17
CDRH4D28NP-6R8NC	6R8	6.8±30%	108.9m(80.7m)	1.12
CDRH4D28NP-8R2NC	8R2	8.2±30%	117.5m(87.0m)	1.04
CDRH4D28NP-100NC	100	10±30%	128.3m(95.0m)	1.00
CDRH4D28NP-120NC	120	12±30%	131.6m(97.5m)	0.84
CDRH4D28NP-150NC	150	15±30%	149.0m(110.4m)	0.76
CDRH4D28NP-180NC	180	18±30%	166.0m(123.0m)	0.72
CDRH4D28NP-220NC	220	22±30%	235.0m(174.5m)	0.70
CDRH4D28NP-270NC	270	27±30%	261.0m(193.3m)	0.58
CDRH4D28NP-330NC	330	33±30%	331.3m(254.8m)	0.56
CDRH4D28NP-390NC	390	39±30%	383.7m(284.2m)	0.50
CDRH4D28NP-470NC	470	47±30%	587.0m(435.0m)	0.48
CDRH4D28NP-560NC	560	56±30%	624.5m(462.6m)	0.41
CDRH4D28NP-680NC	680	68±30%	699.0m(517.8m)	0.35
CDRH4D28NP-820NC	820	82±30%	914.8m(677.6m)	0.32
CDRH4D28NP-101NC	101	100±30%	1.02(765.8m)	0.29
CDRH4D28NP-121NC	121	120±30%	1.27(976.8m)	0.27
CDRH4D28NP-151NC	151	150±30%	1.35(1.08)	0.24
CDRH4D28NP-181NC	181	180±30%	1.54(1.23)	0.22

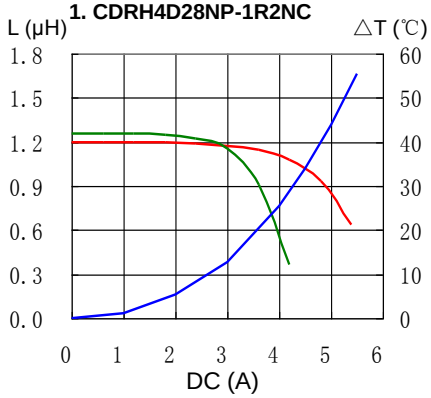
※1. Inductance measuring condition: at 100kHz.

※2. Rated current: The DC current at which the inductance decreases to 65% of its nominal value or when △t=40℃, whichever is lower (Ta=20℃).

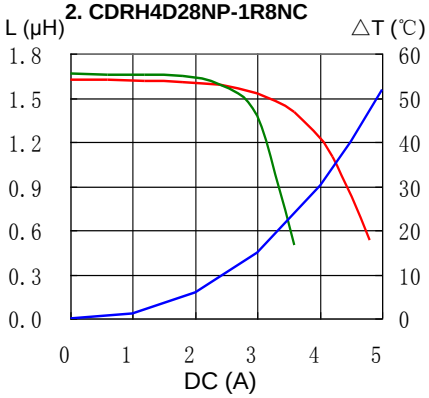
Saturation Current & Temperature Rise Graph

L (20℃) L (100℃) △T

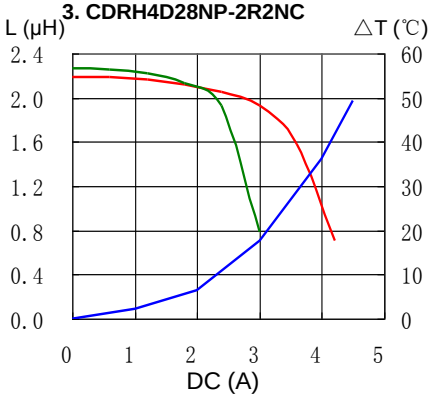
1. CDRH4D28NP-1R2NC



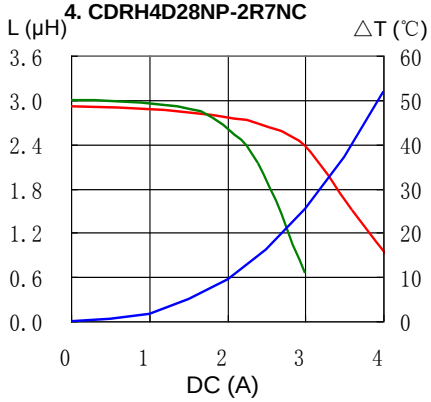
2. CDRH4D28NP-1R8NC



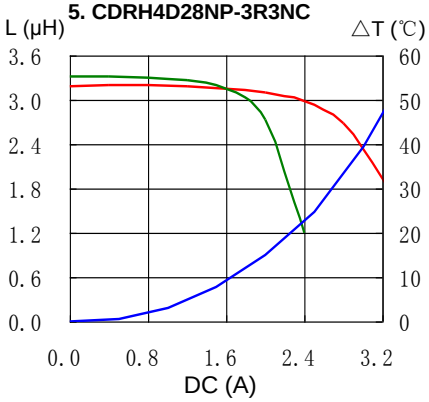
3. CDRH4D28NP-2R2NC



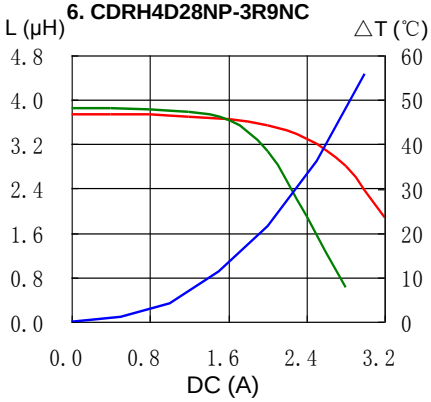
4. CDRH4D28NP-2R7NC



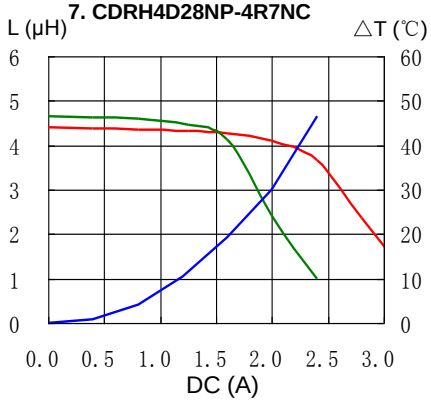
5. CDRH4D28NP-3R3NC



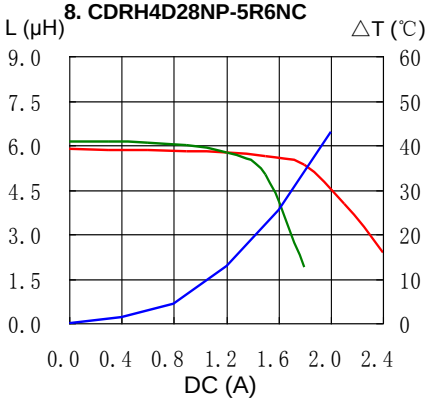
6. CDRH4D28NP-3R9NC



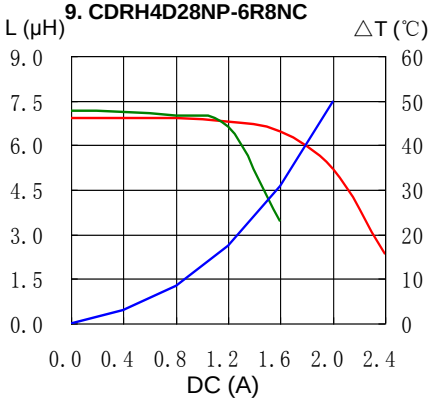
7. CDRH4D28NP-4R7NC



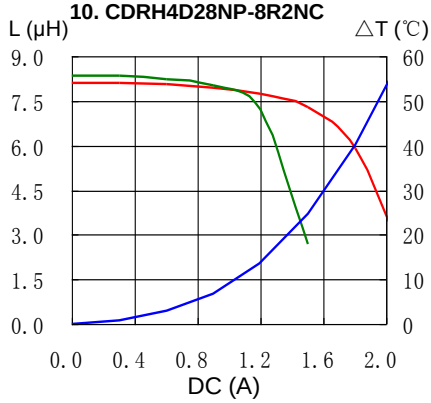
8. CDRH4D28NP-5R6NC



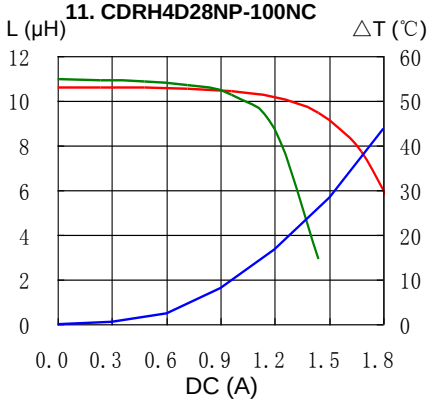
9. CDRH4D28NP-6R8NC



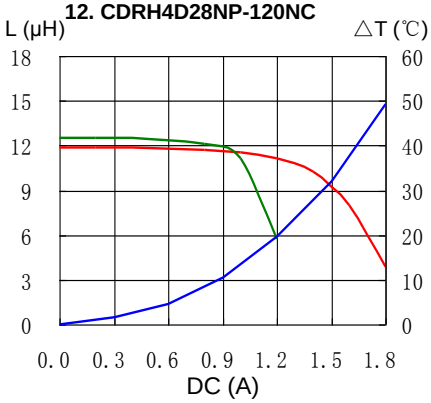
10. CDRH4D28NP-8R2NC



11. CDRH4D28NP-100NC



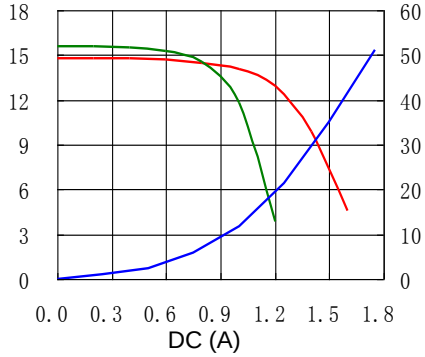
12. CDRH4D28NP-120NC



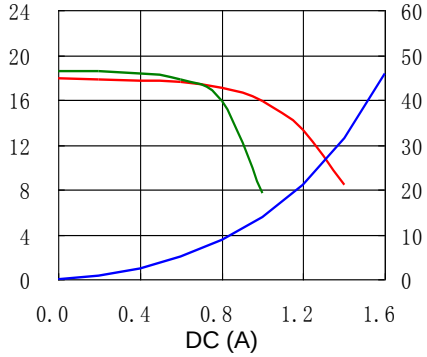
Saturation Current & Temperature Rise Graph

L (20℃) L (100℃) △T

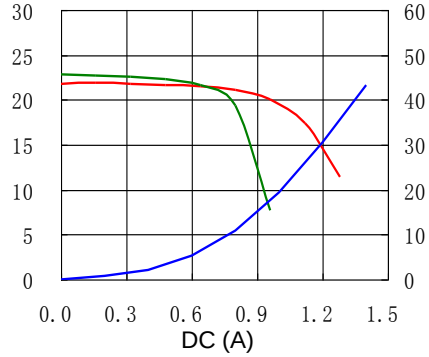
13. CDRH4D28NP-150NC



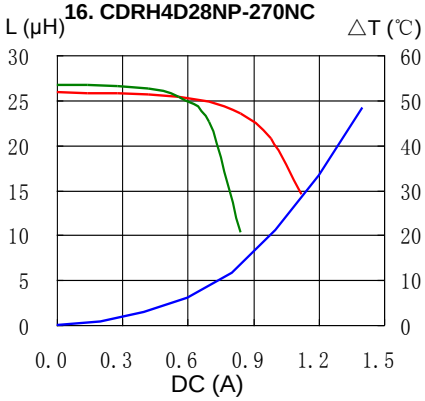
14. CDRH4D28NP-180NC



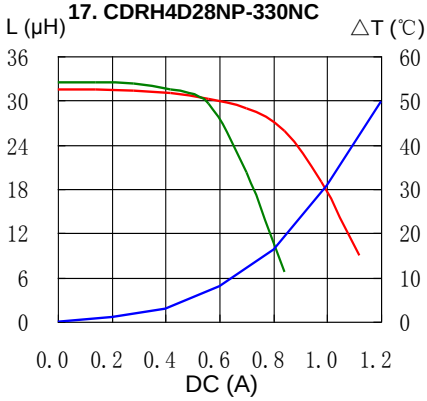
15. CDRH4D28NP-220NC



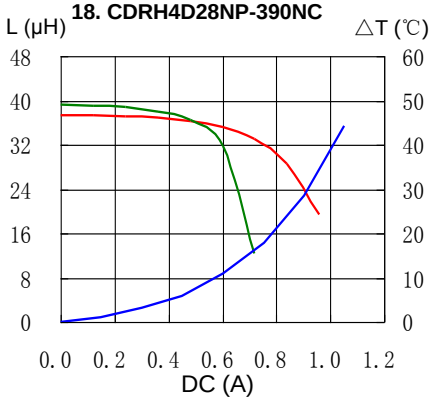
16. CDRH4D28NP-270NC



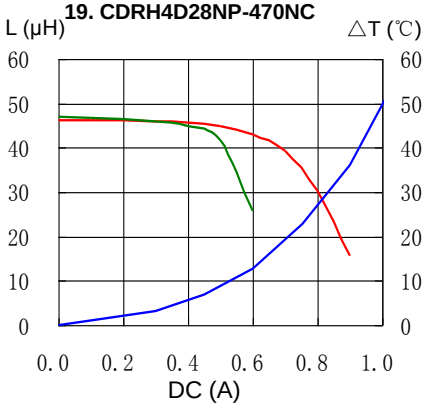
17. CDRH4D28NP-330NC



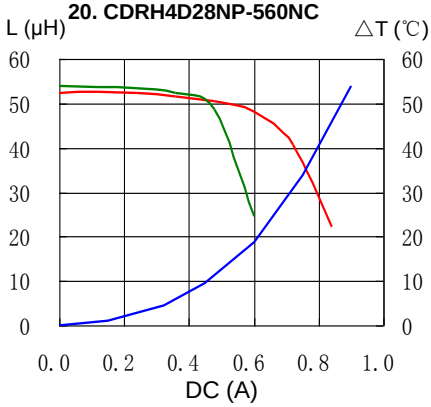
18. CDRH4D28NP-390NC



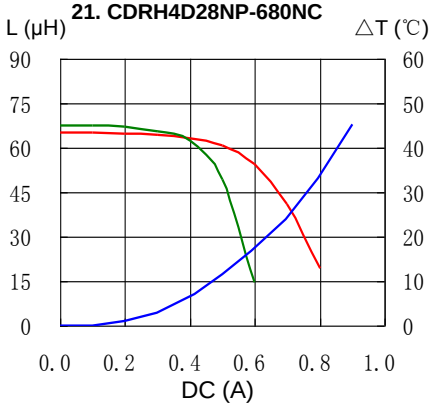
19. CDRH4D28NP-470NC



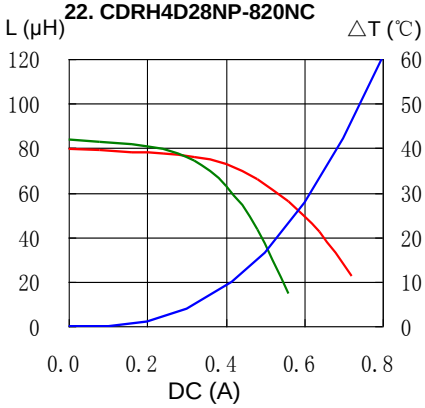
20. CDRH4D28NP-560NC



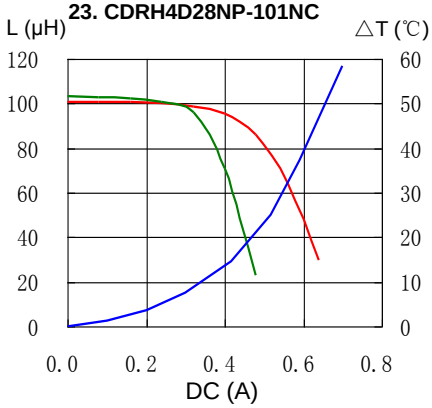
21. CDRH4D28NP-680NC



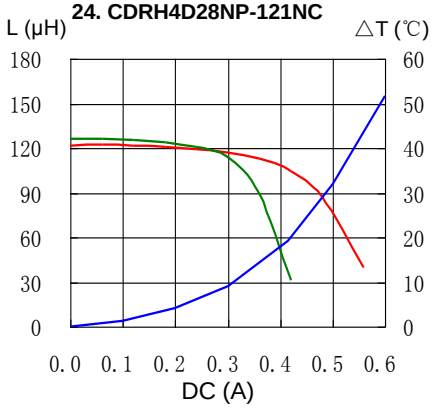
22. CDRH4D28NP-820NC



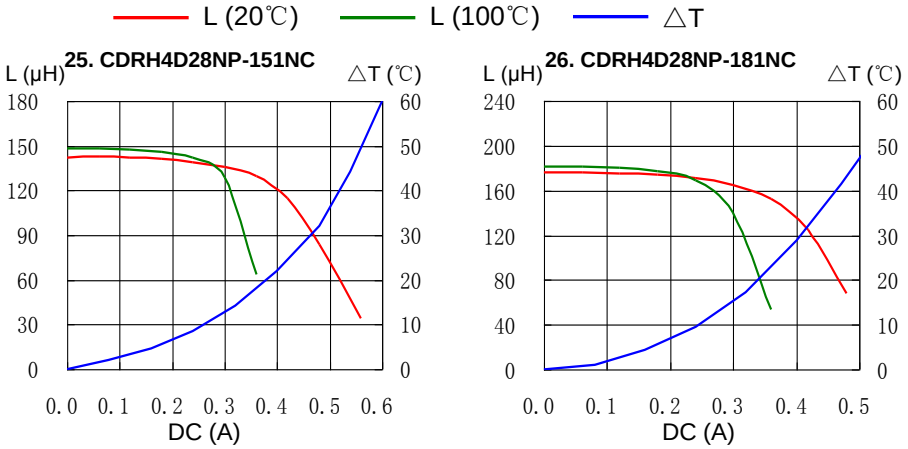
23. CDRH4D28NP-101NC



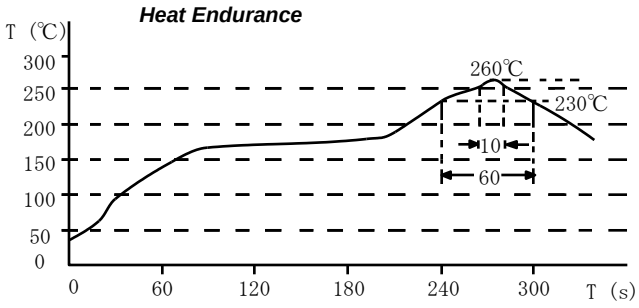
24. CDRH4D28NP-121NC

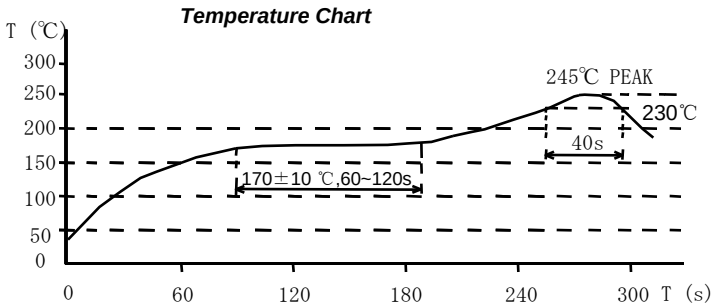


Saturation Current & Temperature Rise Graph



Solder Reflow Condition





Please refer to the sales offices on our website - http://www.sumida.com

Hong Kong
Tel.+852-2880-6781
FAX.+852-2565-9600
sales@hk.sumida.com

Saitama(Japan)
Tel.+81-48-691-7300
FAX.+81-48-691-7340
sales@jp.sumida.com

Chicago
Tel.+1-847-545-6700
FAX. +1-847-545-6720
sales@us.sumida.com

Shanghai
Tel.+86-21-5836-3299
FAX.+86-21-5836-3266
shanghai.sales@cn.sumida.com

Seoul
Tel.+82-2-6237-0777
FAX.+82-2-6237-0778
sales@kr.sumida.com

Obernzell
Tel.+49-8591-937-0
FAX. +49-8591-937-103
contact@eu.sumida.com

Shenzhen
Tel.+86-755-8291-0228
FAX.+86-755-8291-0338
shenzhen.sales@cn.sumida.com

Singapore
Tel.+65-6296-3388
FAX.+65-6841-4426
sales@sg.sumida.com

Neumarkt
Tel.+49-9181-4509-110
FAX. +49-9181-4509-310
infocomp@eu.sumida.com

Taipei
Tel.+886-2-8751-2737
FAX.+886-2-8751-2738
sales@tw.sumida.com

San Jose
Tel.+1-408-321-9660
FAX.+1-408-321-9308
sales@us.sumida.com