

Key Features

SW204KU

General Purpose Solid-State RF Switch Family

- Wideband .1-20GHz
- Low Insertion Loss
- Up to +26dBm
- Convenient USB Power Supply
- 50 Ohm Matched
- Programmable via USB port
- Solid State Reliability and Switching Speed
- Extremely Affordable and Compact



SP4T Absorptive RF Switch

Designed for general purpose low power, high-speed switching, the SP4T SW204KU is useful in many RF projects and test settings.

The active port can be set both manually with front control button or via USB serial commands. Micro-USB conveniently powers the device so no additional lab supply or wiring are needed. All ports are DC-blocking for user convenience.

Remote Operation

Industry standard SCPI commands allow the SW204KU to be controlled by any host system with a USB interface.

The USB port is configured as a virtual COM port allowing user software to access change settings on the switch and monitor status easily and without additional drivers.

Switch Matrix Applications

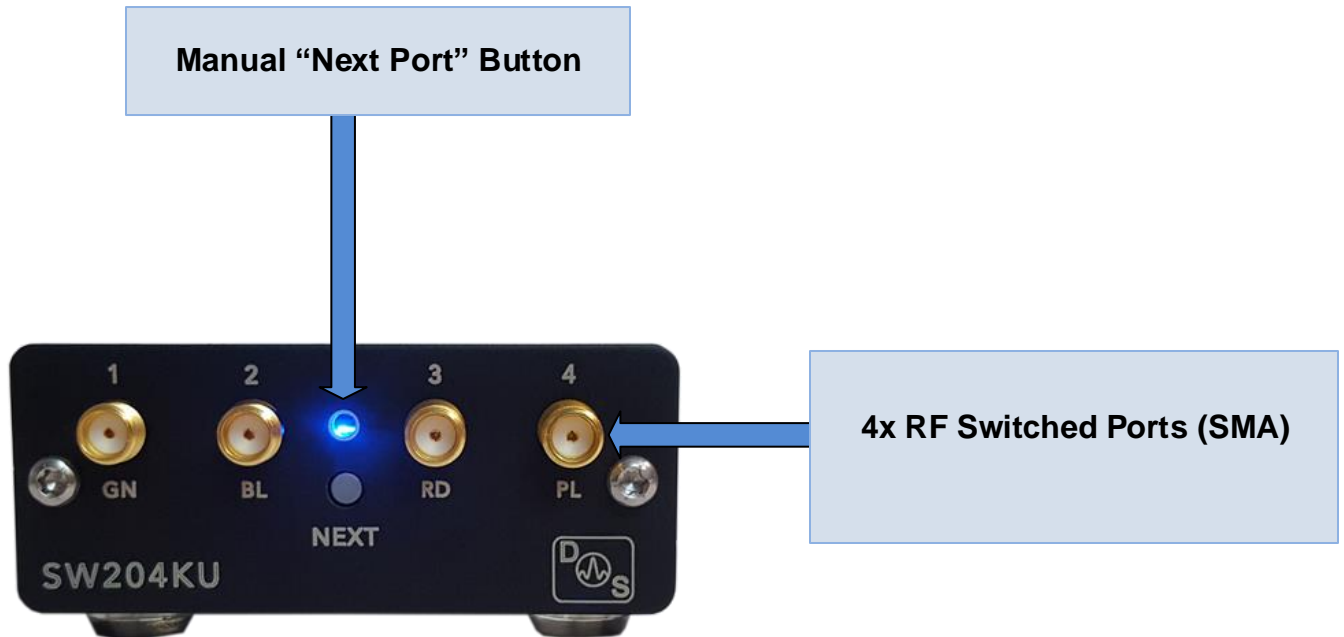
- Automated testing environments
- Satellite communications
- General RF lab use
- Production verification
- Aerospace / defense research
- Antenna research

DS Instruments



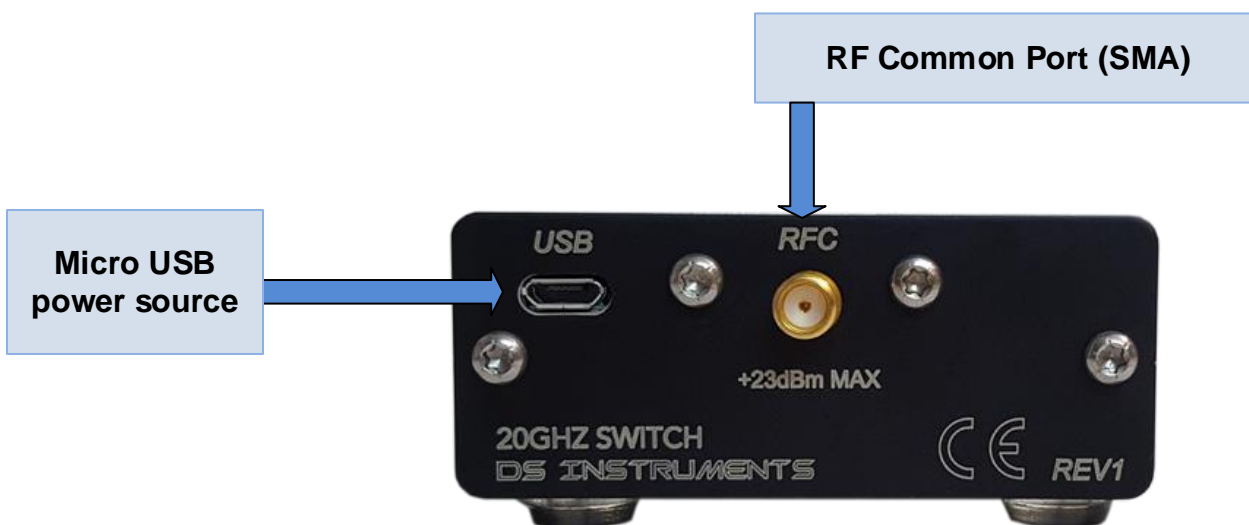
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Usage Notes



Notes

- Do not apply a signal over the maximum input power
- USB drivers are pre-installed in all modern operating systems
- Serial Settings: 115200bps, 8 bits, 1 Stop, no parity



SW204KU – SP4T Switch

TECHNICAL SPECIFICATIONS

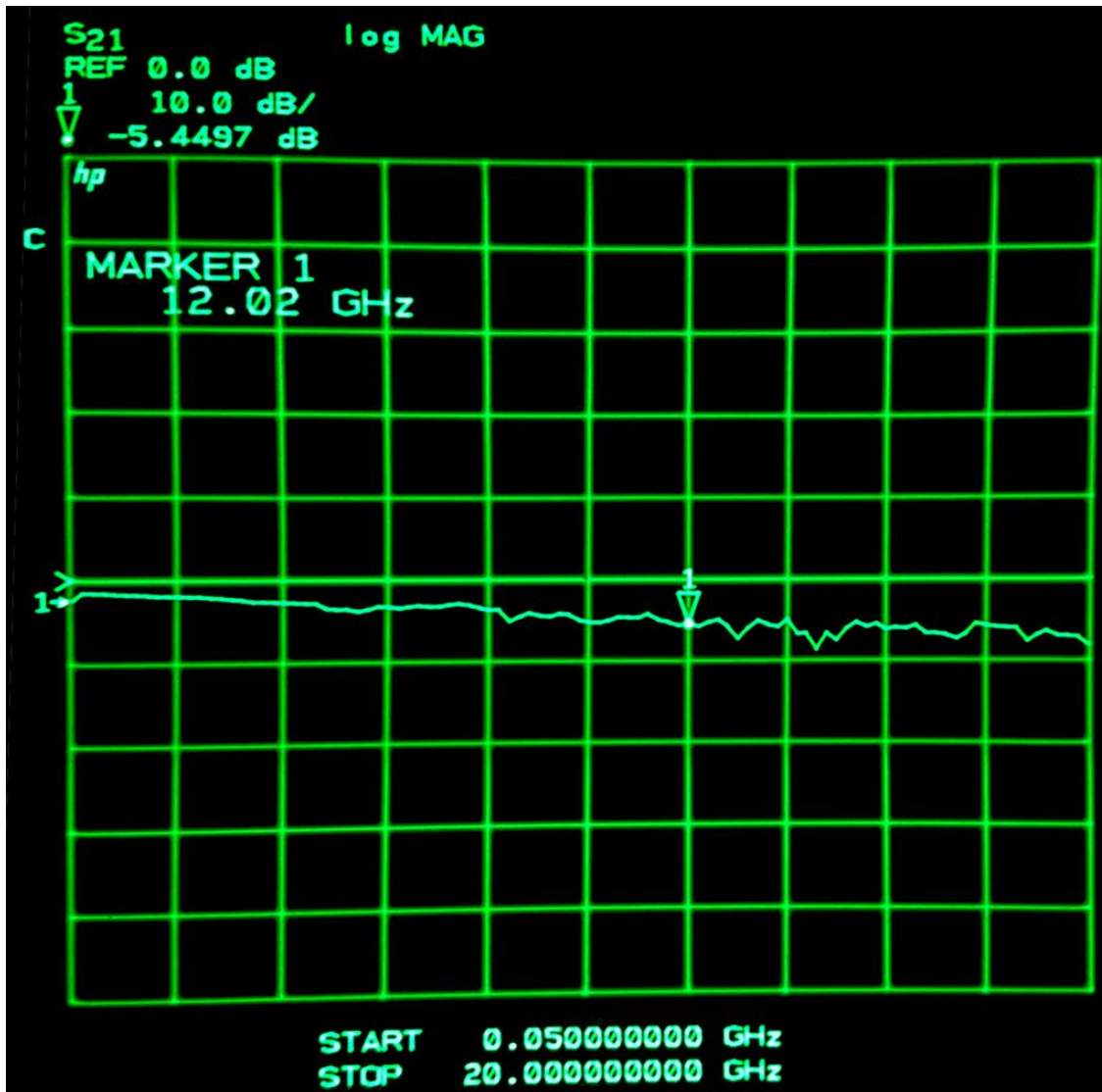
*Measurements taken at 25C unless otherwise noted

Parameter	Min	Max	Typ.	Units
Operating Frequency	0.5	20		GHz
Insertion Loss				
1GHz			2	dB
6GHz			3	dB
12GHz			5	dB
18GHz			7.5	dB
Isolation				
6GHz			40	dB
12GHz			35	dB
18GHz			32	dB
Input Power (through RFC)		+26		dBm
Input Power (Into any terminated port)		+22		dBm
Switching Time (Buzzer Off)			50	uS
Linearity (IP3)			+40	dBm
1dB Compression Point			+22	dBm
Temperature Range	-20	50	25	C
Return Loss (Active Port)			10	dB
Return Loss (Terminated Port)			12	dB
DC Voltage Allowed on RF ports		+20		V
SMA Port Impedance			50	Ohms
DC Current Requirement			100	mA
DC Voltage Range (USB)	4.75	5.25	5.0	V

Notes:

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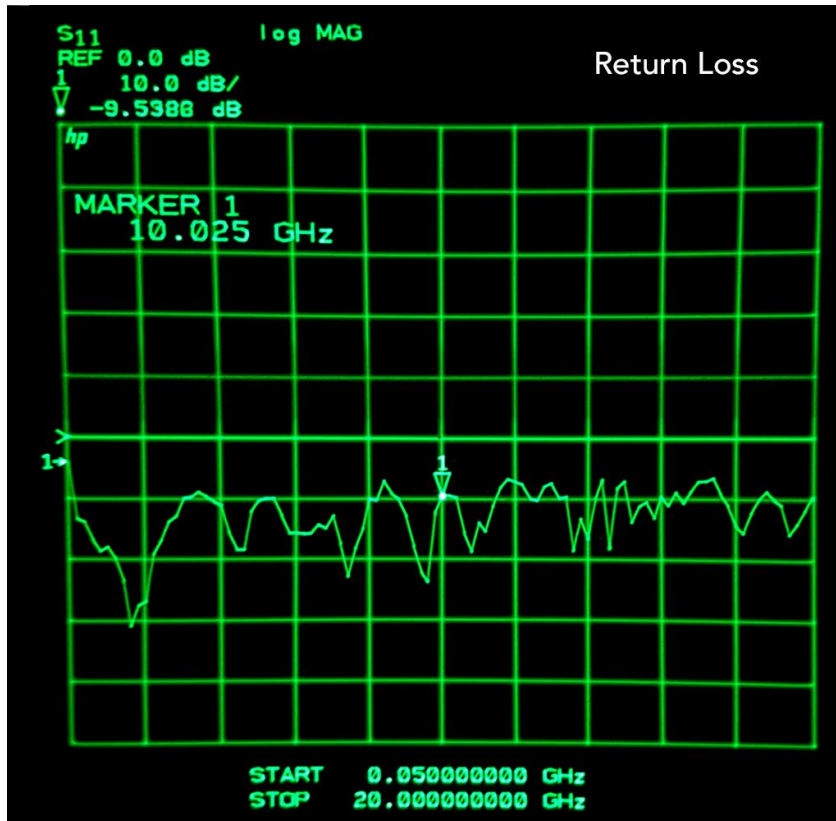
Typical Performance Plots



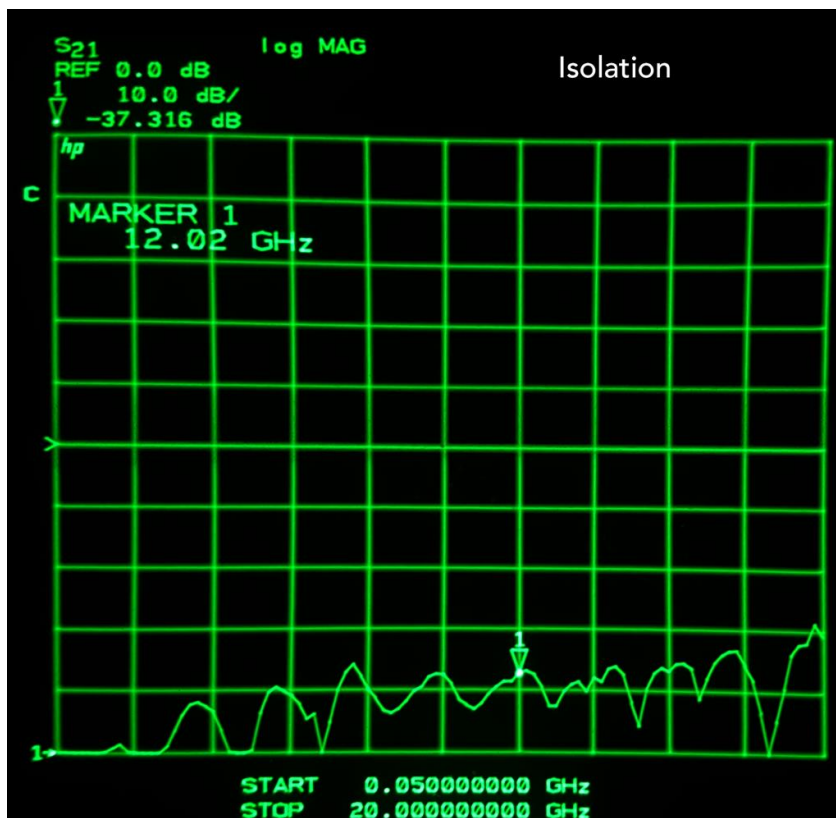
Typical insertion loss from RFC to any RF port.

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Typical Performance Plots



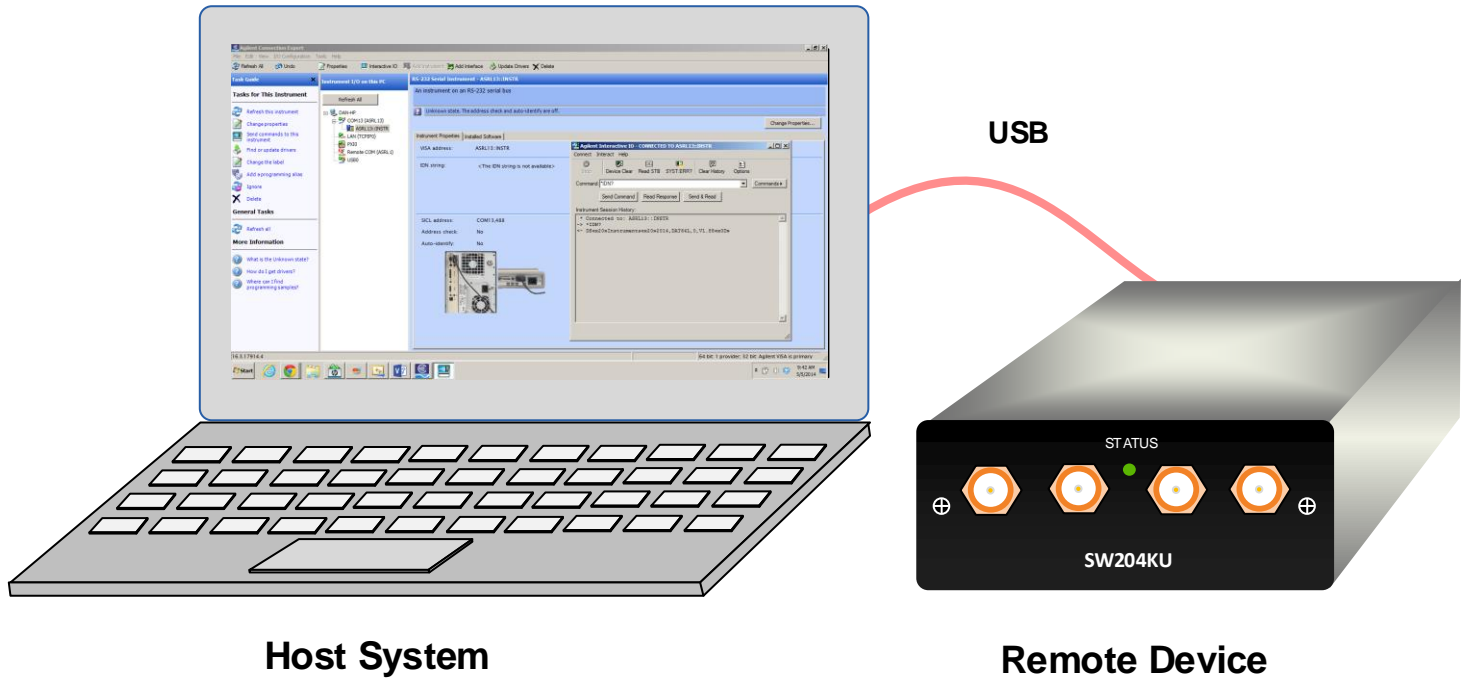
Typical return loss on any RF port



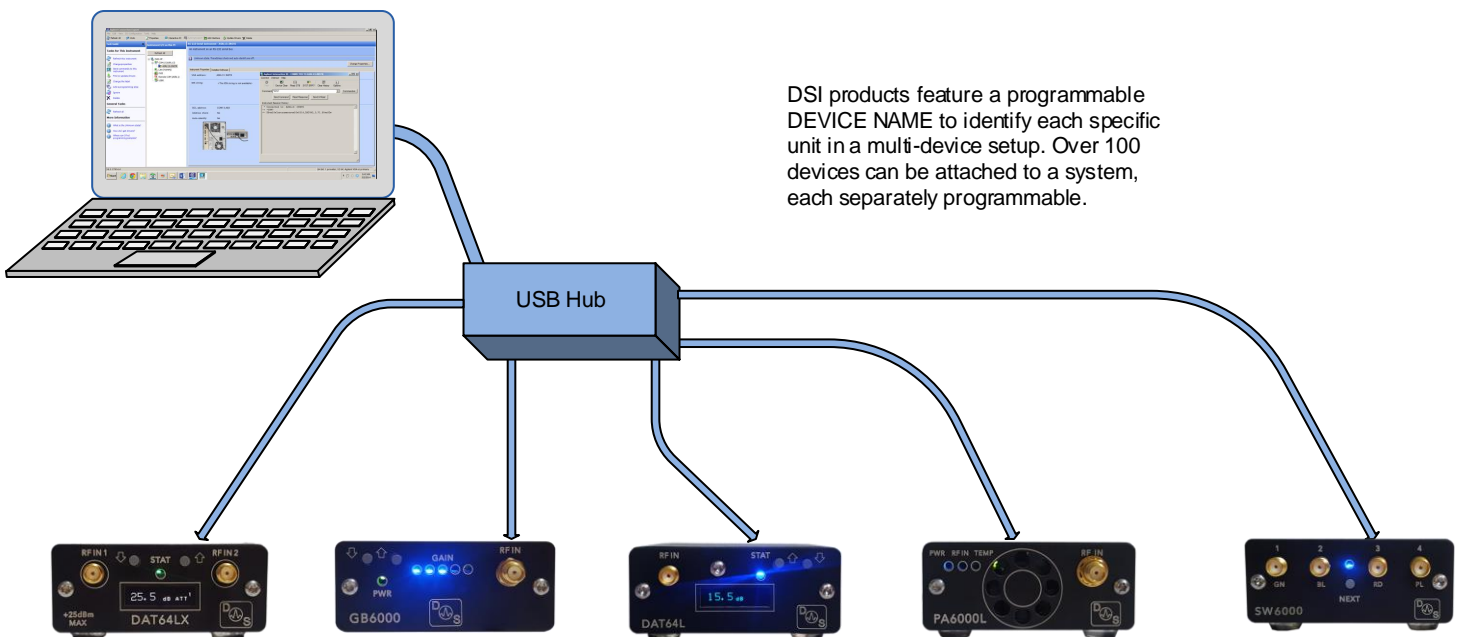
Typical leakage between RFC and non-active switch path

SW204KU

Typical User connections for Remote Features



Multiple Equipment Setup



DSI products feature a programmable DEVICE NAME to identify each specific unit in a multi-device setup. Over 100 devices can be attached to a system, each separately programmable.

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USB COM Port SCPI Commands

RFO 2	- Set port 2 as the active port
RFO?	- Return the active port number
*UNITNAME TomJ	- Set a custom nickname for this unit
*UNITNAME ?	- Return user set device nickname
*IDN?	- Return standard identification string
*RST	- Reset device

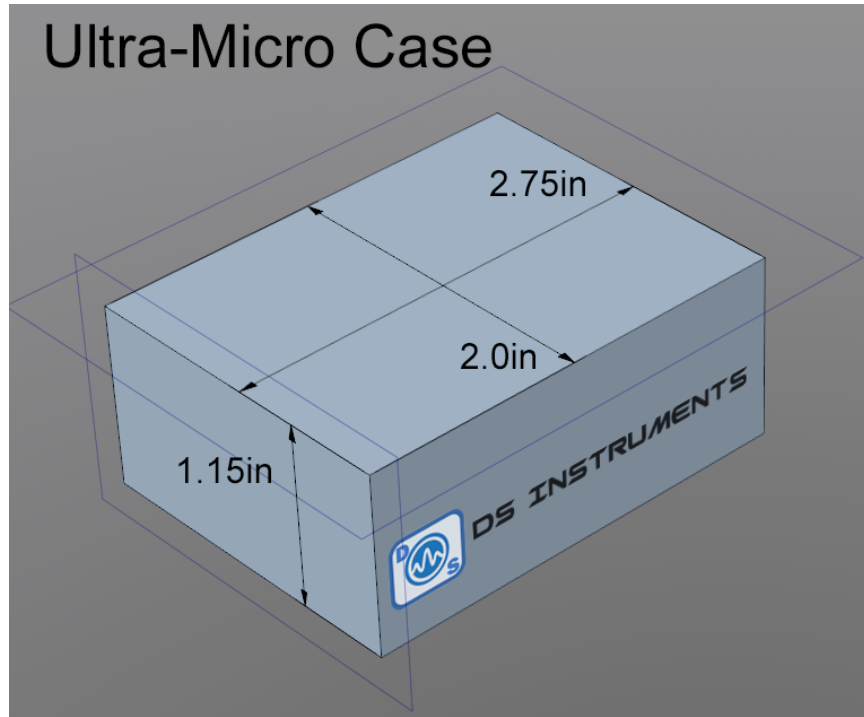
(115200 Baud)

Included Windows GUI



SW204KU

MECHANICAL INFORMATION



SW204KU – SP4T RF Switch 20GHz

Ordering Information

SW204KU, 1 - 20GHz, SP4T RF Switch Matrix	\$849.00
SW6000, 25MHz - 6GHz, SP4T RF Switch Matrix	\$409.00

Contact Information

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