

~Key Features~

- Front Panel OLED Display
- 63 dB Range, 0.5dB Steps
- 5MHz to 6GHz
- Standalone Operation, no PC needed
- Can be used as programmable attenuator using USB port/PC
- Ultra Compact
- Affordable
- Audio & Visual Feedback

DS Instruments

DAT64L (R6)

Programmable RF Attenuator - 63 dB Range
With OLED Display and User Interface



The DAT64L Compact RF Attenuator

The DAT64L is a stand-alone wide-band digital attenuator instrument rated for 6GHz. Attenuation range varies from 0 to 60 dB with a 0.50dB minimum step size. Insertion loss is between 2dB and 6dB, and return loss is typically 15dB. The DAT64L is a dual-control device: attenuation setting can be accomplished both by the user interface OR via USB port serial commands.

Remote Operation

Industry standard SCPI commands allow the DAT64L 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 the DAT64L as if it were a standard serial COM device without any additional drivers.

DAT64L Applications

- Internet of things development
- 5G design and testing
- Automated testing environments
- General RF lab use
- Control systems
- Production verification
- Educational / university lab use
- Aerospace / defense research
- Wireless infrastructure



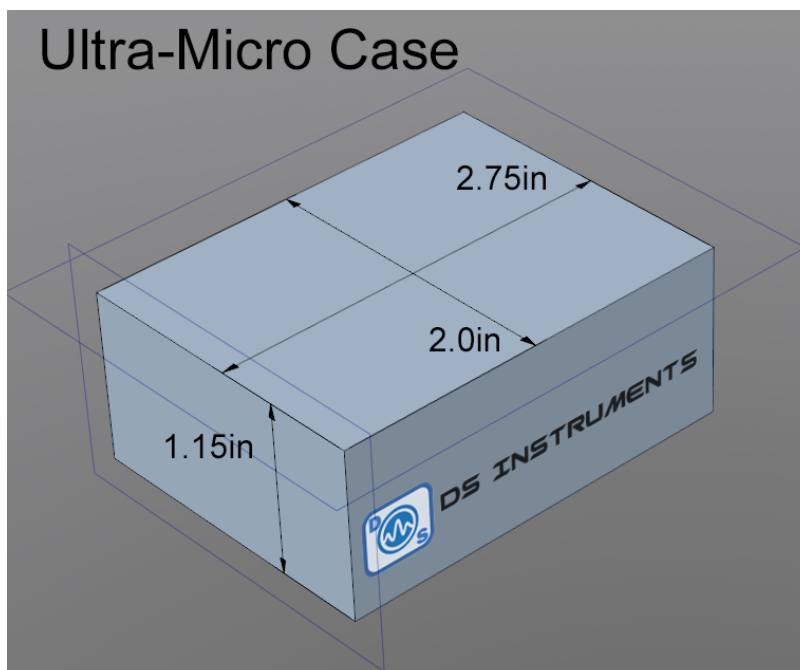
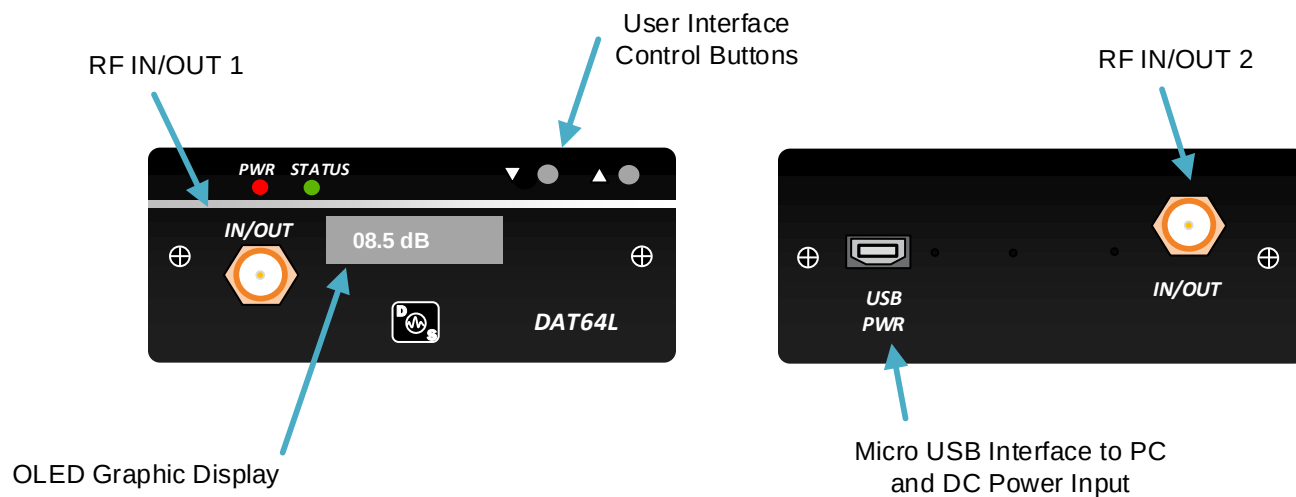
DAT64L

SPECIFICATIONS

Parameter	Min	Max	Typ	Units
DAT64L Frequency Range	5	6000		MHz
Insertion Loss, 1 to 3000MHz	2	4	3	dB
Insertion Loss, 3 to 4.5GHz	4	6	5	dB
Insertion Loss, 4.5 to 6GHz	5	8	6	dB
Return Loss	12	20	15	dB
Attenuation Range	0	63		dB
Min Step Size	0.5			dB
Step Size Error		+/- 0.25		dB
Maximum Input Power		+25		dBm
Third Order Intercept		+55		dBm
Accuracy, all states: DC - 0.8GHz (Referenced to Insertion Loss) 0.8GHz – 6GHz		$\pm (0.10 + 5\% \text{ of Atten. Setting}) \text{ Max.}$ $\pm (0.30 + 3\% \text{ of Atten. Setting}) \text{ Max.}$		
USB Port DC Voltage	4.75	5.25	5.0	vdc
Switching Time (OLED & Buzzer)			35	mS
Switching Time (USB Only)			500	uS
Temperature Range	-30	50	25	C
Current Requirement			150	mA
SMA Frequency Rating	0	18		GHz
Write Cycle Lifespan			10^8	

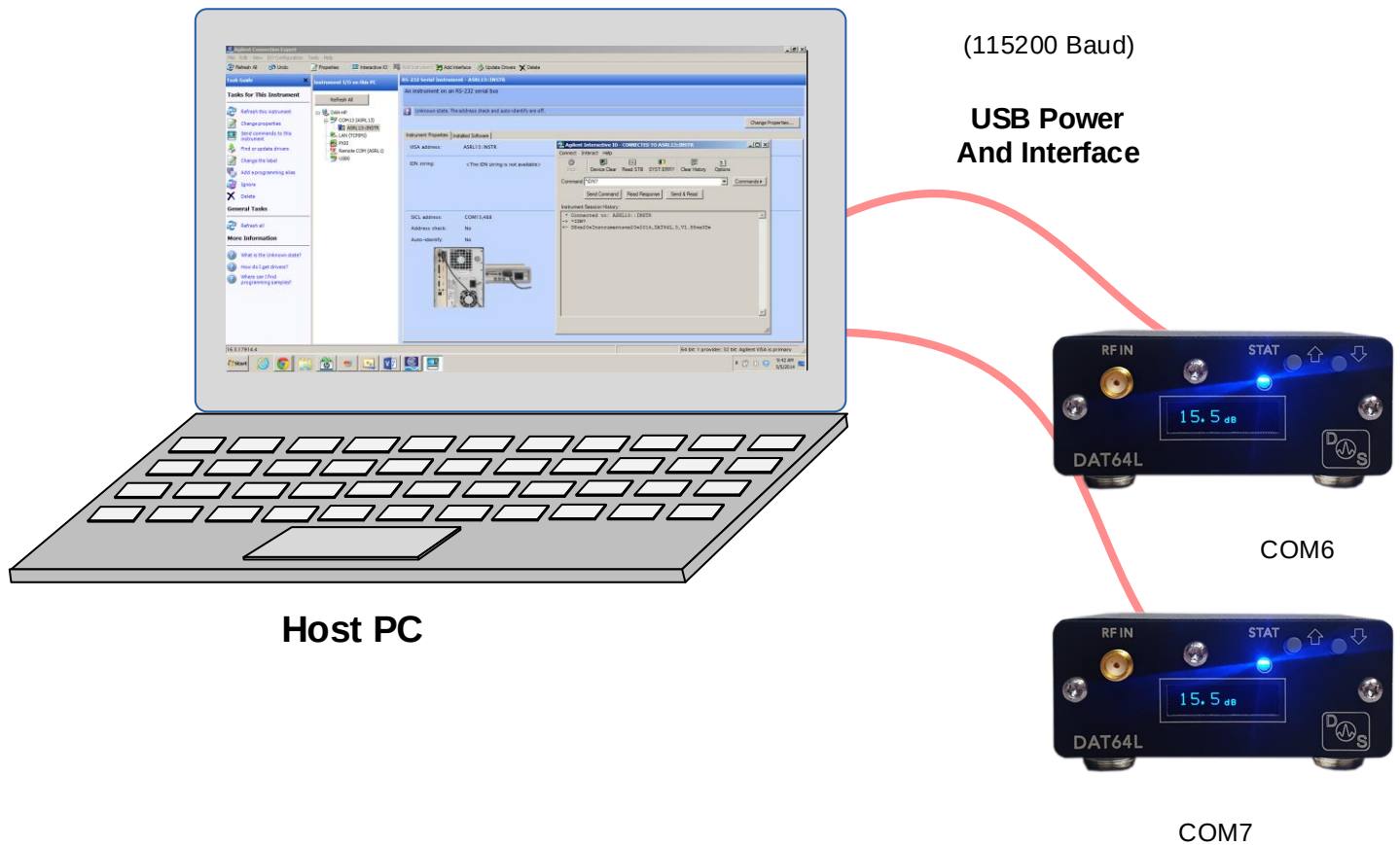
DAT64L

Front and Rear Panel Features



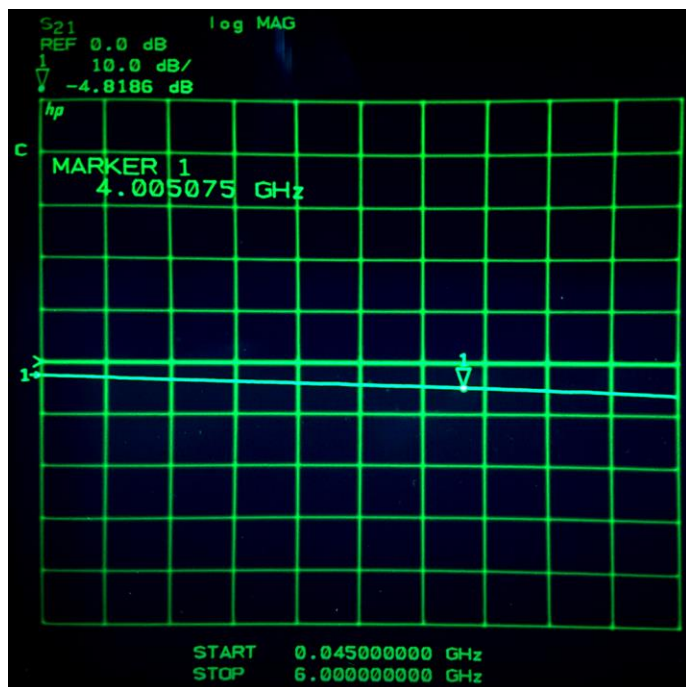
DAT64L

Typical User connections for Remote Operation from PC

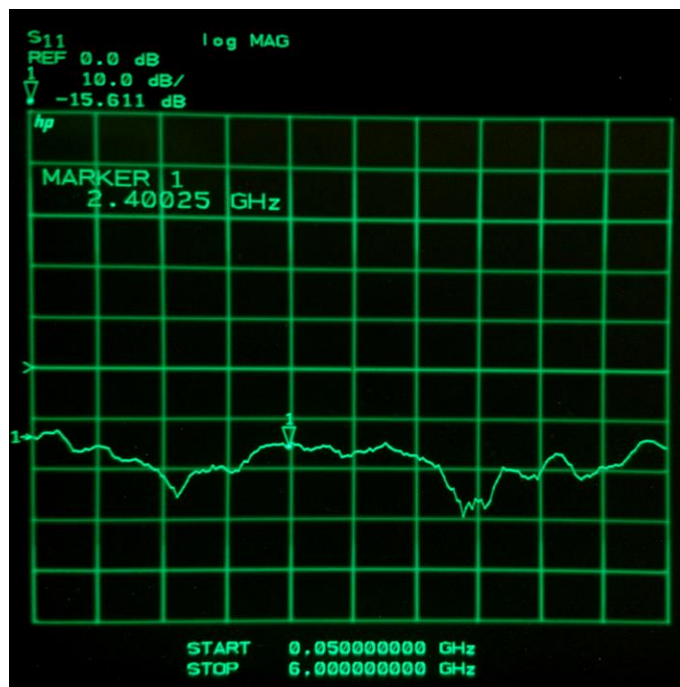


DAT64L

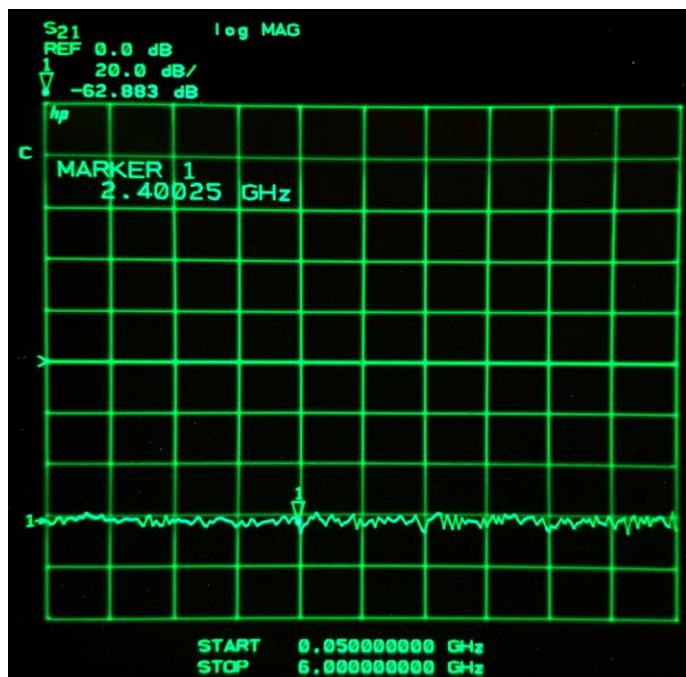
Performance Plots



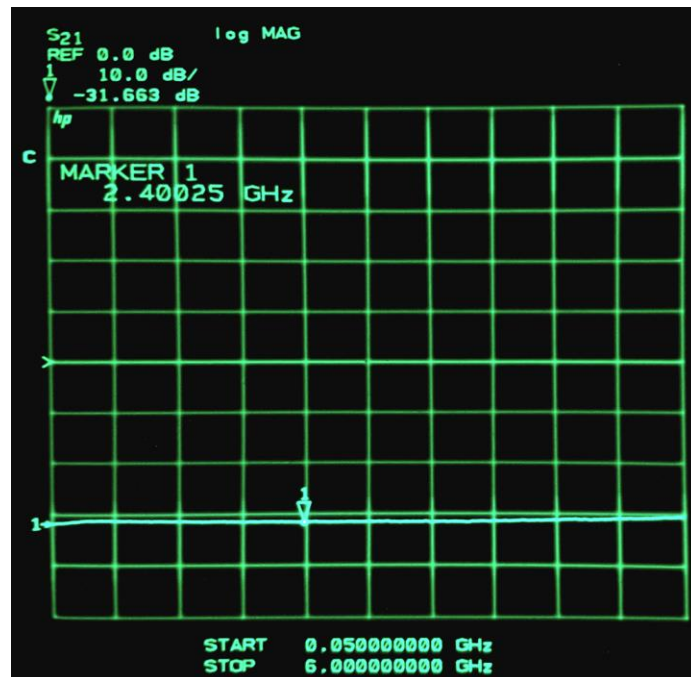
Insertion Loss – 0dB Setting



Return Loss – 0dB Setting



Frequency Response – 63dB Setting



Frequency Response – 32dB Setting

DAT64L

Windows GUI



USB COM Port SCPI Commands

INPUT:ATT xyz	- Set attenuation to "xyz"
INCR	- Increase attenuation by stepsize
DECR	- Decrease attenuation by stepsize
INCR x	- Increase attenuation by "x"
DECR y	- Decrease attenuation by "y"
STEP xy	- Set the stepsize to "xy"
*IDN?	- Return standard identification string
*RST	- Reset device

(115200 Baud)

DAT64 STEP ATTENUATOR FAMILY

Ordering Information

DAT64, 0- 63dB, 5 to 6000MHz (USB only)	\$519.00
DAT64L, 0- 63dB, 5 to 6000MHz (OLED + Buttons + USB)	\$599.00
DAT90L, 0-90dB, 5-6000MHz (OLED + Buttons + USB)	\$699.00
DAT64F, 0-63dB, 100-6000MHz, 0.25dB steps (OLED + Buttons + USB)	\$629.00
DAT64H, 0-63dB, 0.1-12GHz, 0.5dB steps (OLED + Buttons + USB)	\$899.00
DAT60KU, 0-63dB, 1-18GHz, 0.5dB steps (OLED + Buttons + USB)	\$1099.00

*NOTES: Some devices listed have separate dedicated datasheets available

Contact Information

www.ds instruments.com

support@ds instruments.com

call us: (805) 242-6685

