

Key Features

- 60 dB Range, 0.50dB Steps
- 1GHz to 18GHz
- Front Panel OLED Display
- High Input Power
- Standalone Operation, no PC needed
- Programmable via USB virtual COM port
- Ultra Compact
- Affordable & Reliable
- Audio Feedback

DS Instruments



DAT60KU

Wideband Programmable RF Attenuator – 60dB



The DAT60KU Compact RF Attenuator

The DAT60KU is a stand-alone wide-band digital attenuator instrument rated for 1 – 18GHz and useful in an extended range beyond 22GHz. Attenuation range varies from 0 to 60 dB with a 0.50dB minimum step size. Insertion loss is between 12dB and 20dB. The DAT 60KU 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 DAT60KU to be controlled by any host system with a USB interface.

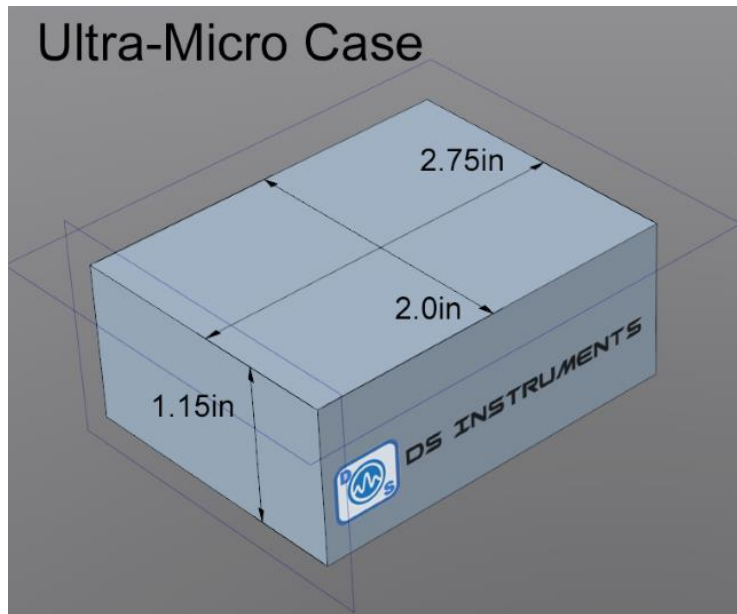
The USB port is configured as a virtual COM port allowing user software to access the DAT60KU as if it were a standard serial COM device without any additional drivers.

DAT60KU Applications

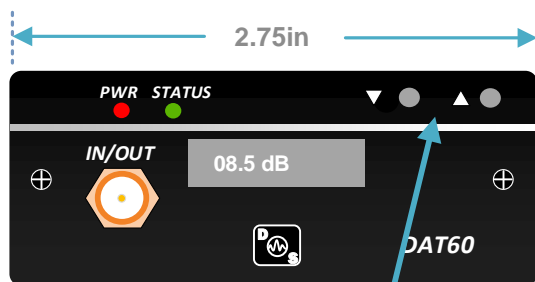
- Electronic warfare
- Automated testing environments
- General RF lab use
- Control systems
- Satellite communications
- Line-of-sight links
- Production verification
- Educational / university lab use
- Aerospace / defense research
- Wireless infrastructure
- Radar systems
- Phased array applications

DAT60KU

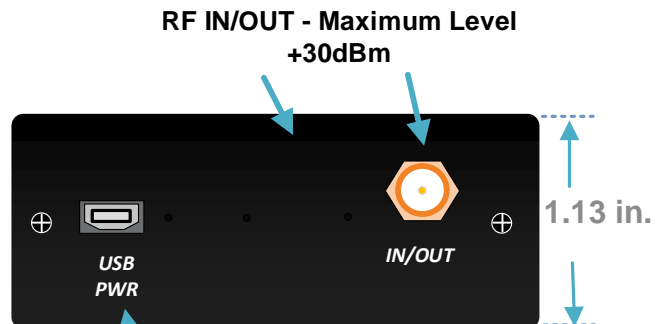
MECHANICAL



CASE DIMENSIONS:
1.15(H)x2.75(W)x2.15(L) in.



User Interface
Control Buttons



Micro USB Interface to PC
and DC Power Input



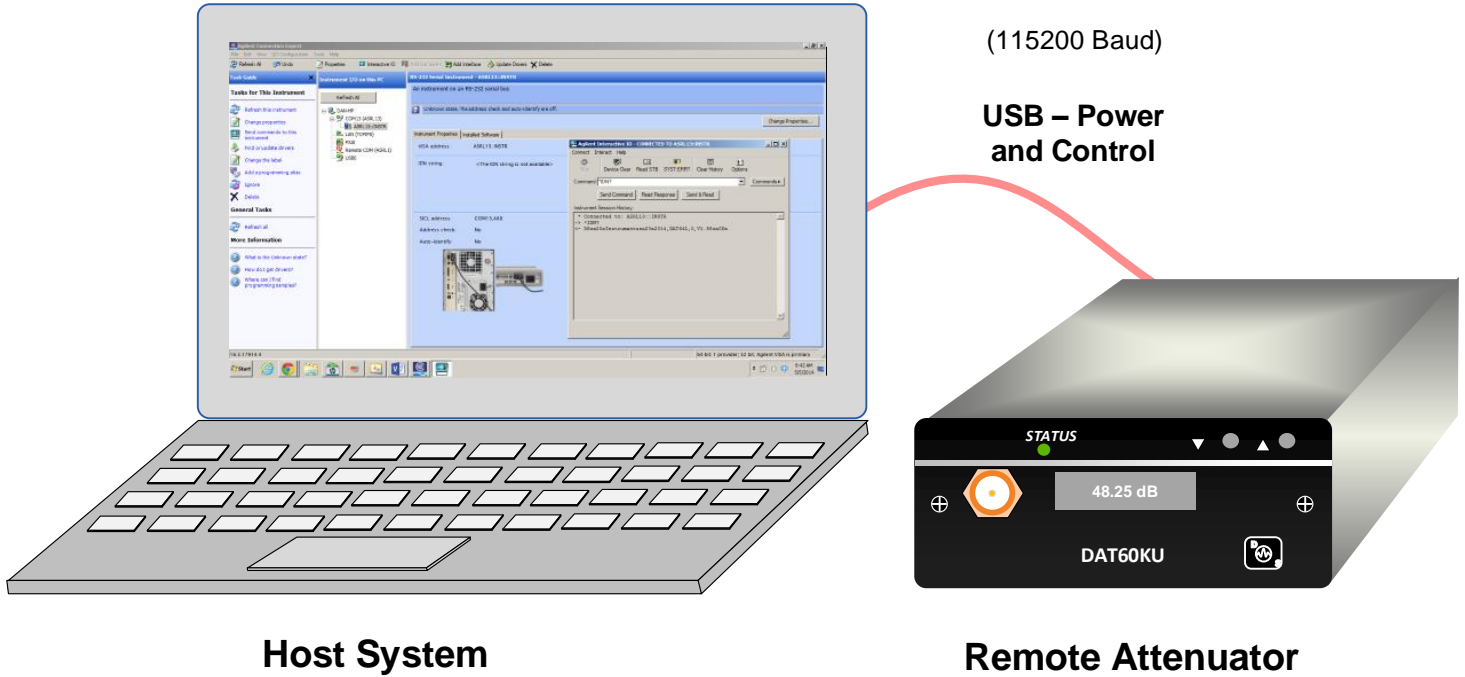
DAT60KU

SPECIFICATIONS

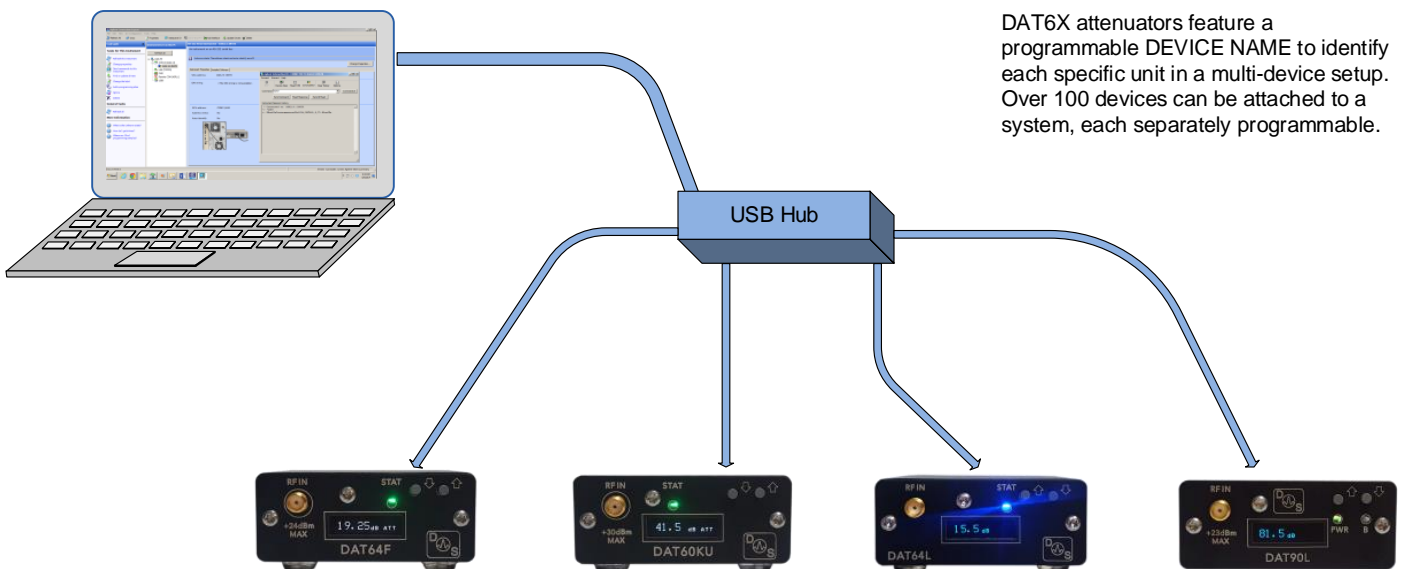
Parameter	Min	Max	Typ	Units
Frequency Range	1	18		GHz
Insertion Loss, 1 to 6GHz	11	16	14	dB
Insertion Loss, 6 to 10GHz	12	16	15	dB
Insertion Loss, 10 to 14GHz	12	18	17	dB
Insertion Loss, 14 to 18GHz	14	21	19	dB
Return Loss	10		12	dB
Attenuation Range	0	60		dB
Min Step Size			0.5	dB
Maximum Input Power			+30	dBm
Third Order Intercept			+38	dBm
Attenuation Error RMS (1-15GHz)		3	0.5	dB
Attenuation Error RMS (15GHz+)		3	1	dB
Temperature Range (OLED & Controls)	-30	50	25	C
Temperature Range (USB only Version)	-45	60	25	C
Switching Speed (OLED & Buzzer Enabled)			35	mS
Switching Speed (USB only)			250	uS
SMA Connector Max Rating	0	26.5		GHz
DC Power Input - Micro USB Port	4.75	5.25	5.0	VDC
Device Current Requirement		200	100	mA

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Typical User connections for Remote Operation from PC



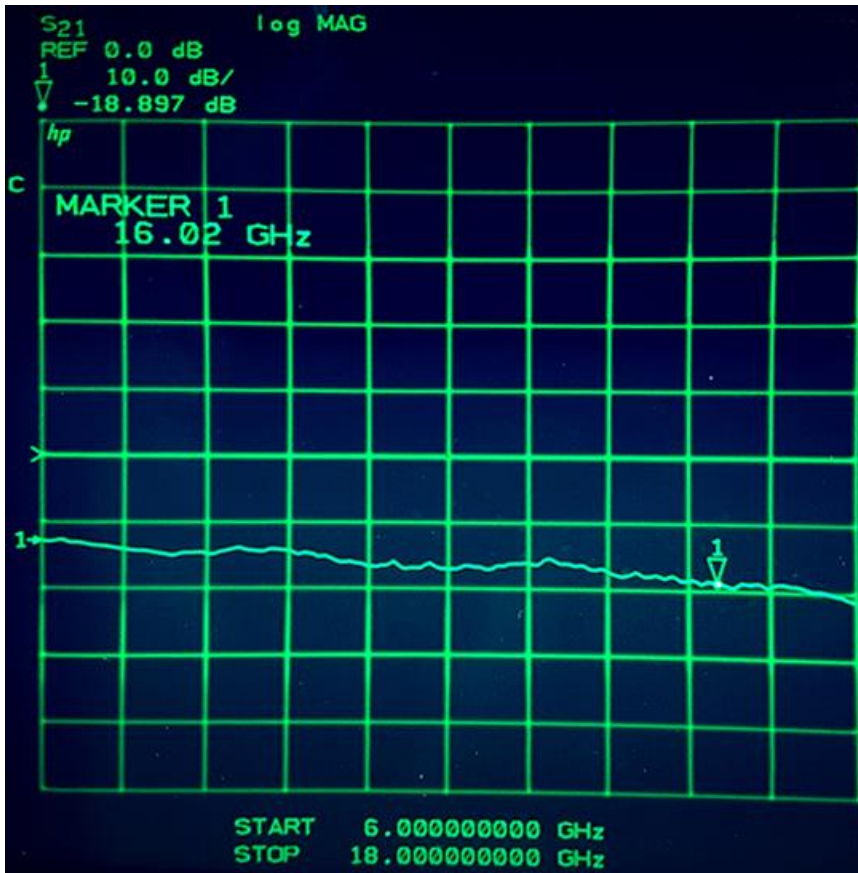
Multiple DAT6X Attenuator Setup



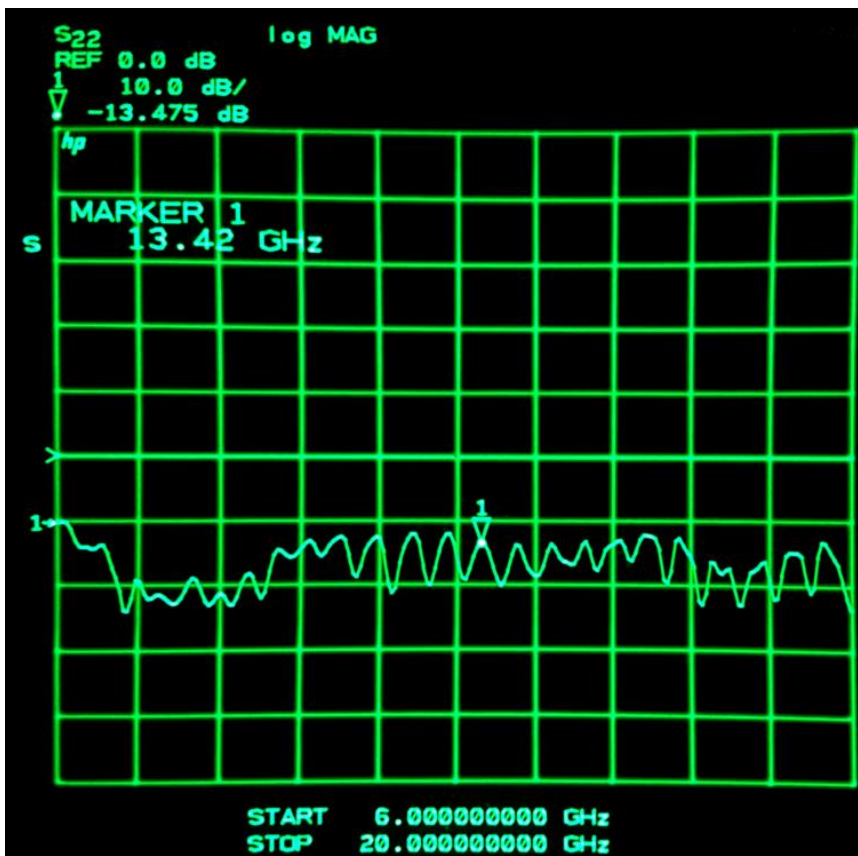
DAT6X attenuators feature a programmable DEVICE NAME to identify each specific unit in a multi-device setup. Over 100 devices can be attached to a system, each separately programmable.

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Typical Frequency Response



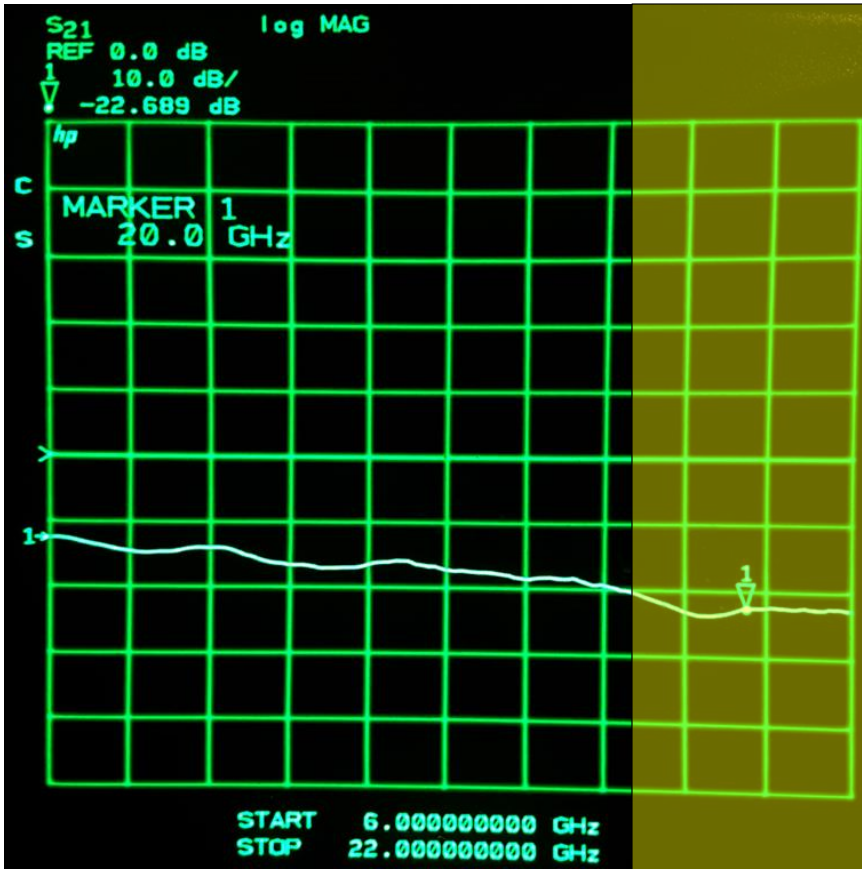
Insertion Loss: 0dB Setting



Return Loss: 0dB Setting

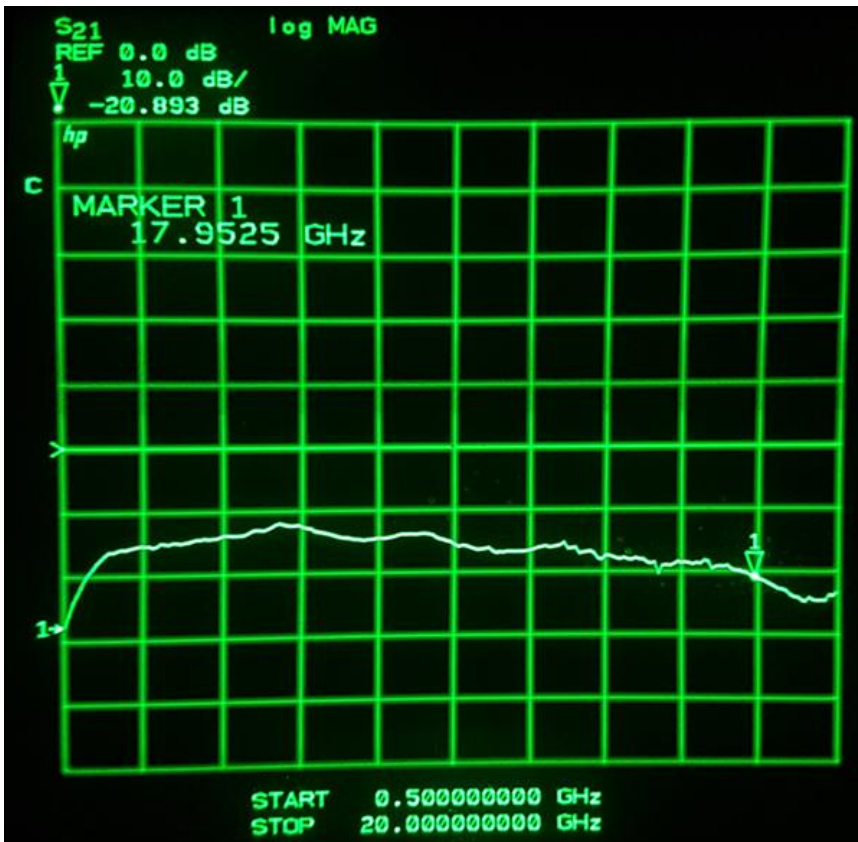
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Extended Range Insertion Loss – 18GHz+



Over-range Insertion Loss: 0dB Setting

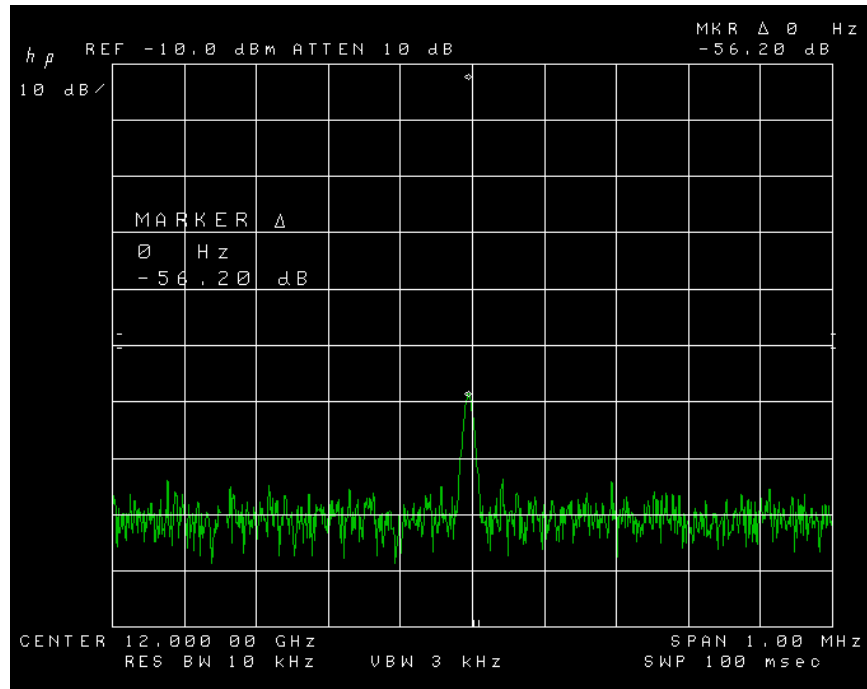
The DAT60KU is useable well beyond 18GHz, insertion loss shown up to 22GHz.



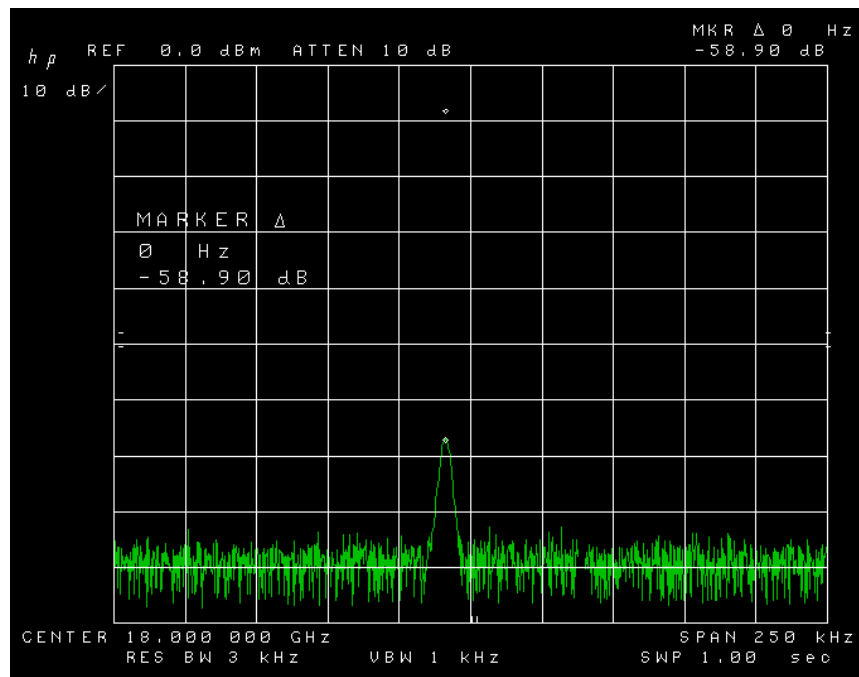
DC blocking capacitors limit low-end to 1GHz

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Signal at 12GHz: 60 dB Attenuation



Signal at 18GHz: 60 dB Attenuation



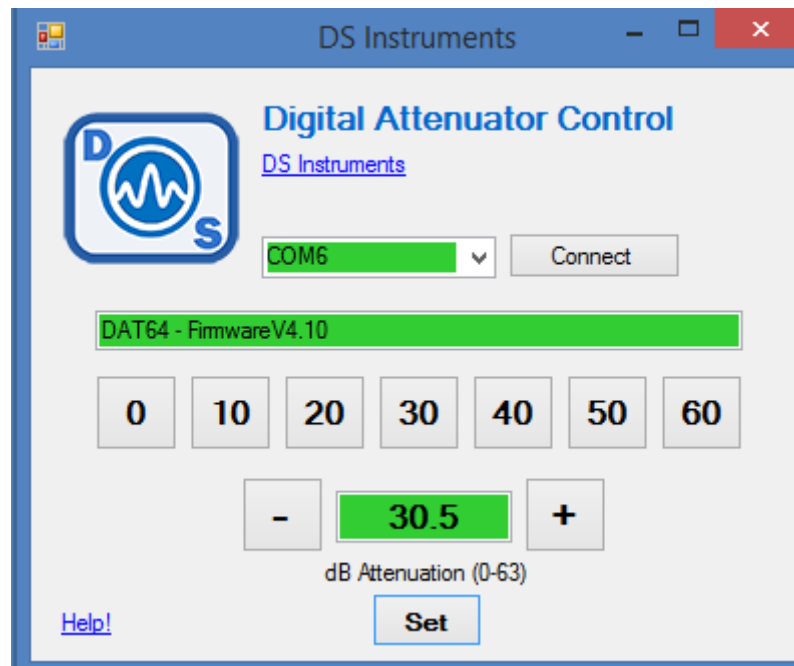
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USB COM Port SCPI Commands

INPUT:ATT xyz	- Set attenuation to "xyz"
ATT xyz	- Shorthand command for INPUT:ATT
ATT?	- Return current attenuation setting
INCR	- Increase attenuation by step size
DECR	- Decrease attenuation by step size
INCR x	- Increase attenuation by "x"
DECR y	- Decrease attenuation by "y"
STEP xy	- Set the step size to "xy"
*UNITNAME TomJ	- Set a custom nickname for this unit
*UNITNAME ?	- Return user set device nickname
*BUZZER OFF	- Turn off audio beeps – lower response time
*DISPLAY OFF	- Disable OLED display – lower response time
*IDN?	- Return standard identification string
*RST	- Reset device

(115200 Baud)

Free Windows GUI



DAT60KU

Ordering Information

DAT60KU, 0- 60dB, 1 to 18GHz Attenuator (OLED Display and Control Buttons)	\$999.00
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DAT60KUN, 0- 60dB, 1 to 18GHz Attenuator (No Display / USB only)	\$929.00
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Contact Information

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