



P/N: LBW-AT06-F40W05A63-29F29F

USB / Ethernet поглощающий аттенюатор с цифровым управлением
0,1 - 40 ГГц

Характеристики:

- Ультранизкий диапазон рабочих частот 0,1 - 40 ГГц
- Управление и питание через USB
- Ослабление до 63 дБ с шагом 1 дБ



Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1~18		18~30			30~40			GHz	
Attenuation Range		63			62			61		dB
Insertion Loss		10.0	11.0		12.0	13.0		14.0	15.0	dB
Insertion Loss Temperature Coefficient		0.01			0.01			0.01		dB/ °C
Attenuation Flatness: (Referenced to Insertion Loss)		±4.0			±5.0			±6.0		dB
Control Bits			6			6			6	Bit
Control Step Size		1			1			1		dB
Input VSWR (All Atten. States)		1.8	2.1		1.9	2.0		1.9	2.0	: 1
Output VSWR (All Atten. States)		1.8	2.1		1.9	2.0		1.9	2.0	: 1
Input 0.1 dB Compression Point (P0.1dB)		25			25			25		dBm
RF Input Power			30			30			30	dBm
Input IP3		41			42			43		dBm
Weight	5.0 Max.									Ounces
Impedance	50									Ω
Bias Current	210 Max.									mA
Power Supply	USB(+5.0V)									
Input / Output Connectors	2.92mm-Female									
Control Interface	USB2.0 & Ethernet(IPv4) (Control Cable Included)									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

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Ordering Information

Part No.	Description
LBW-AT06-F40W05A63-29F29F	0.1-40GHz USB Control Attenuator

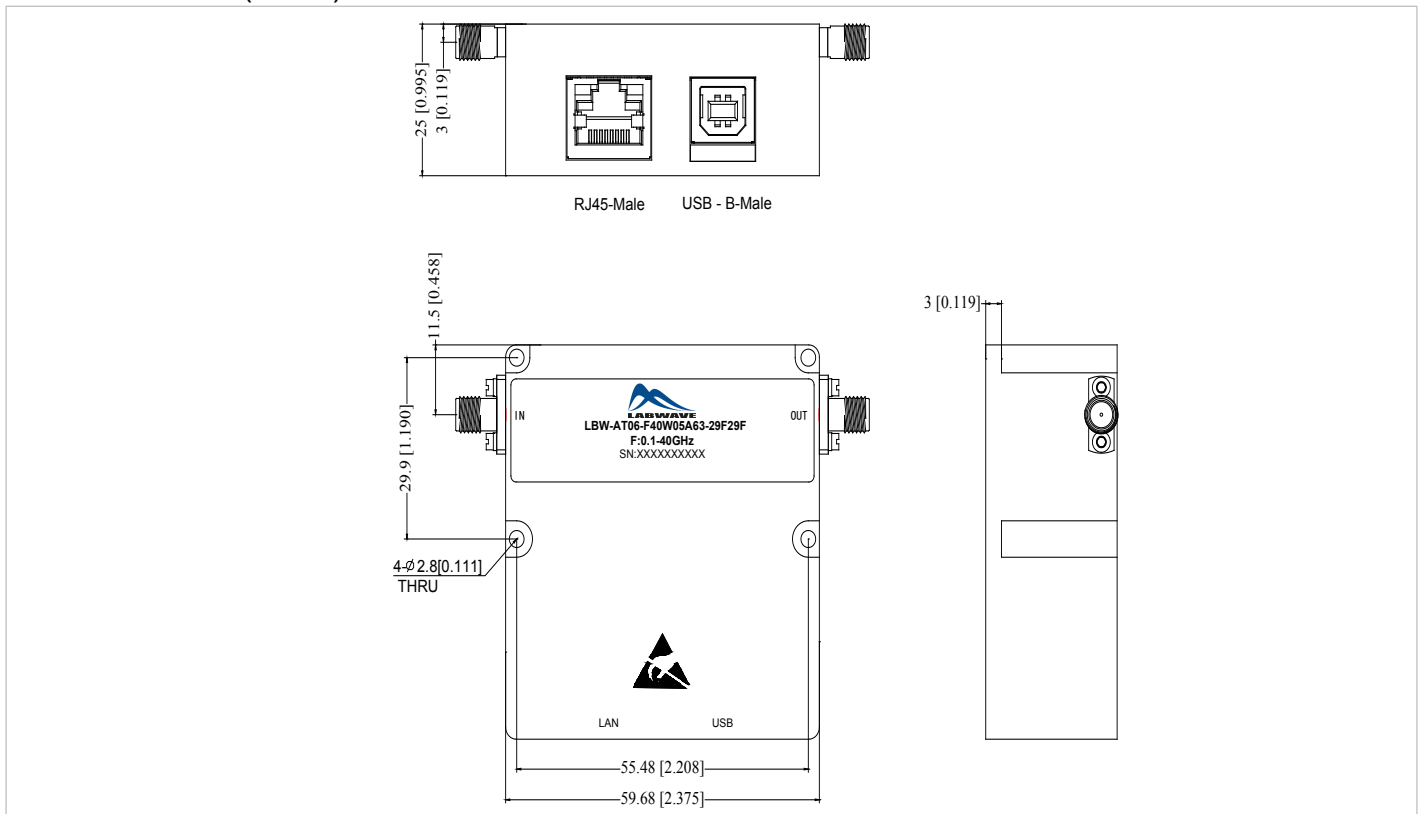
Environmental Specifications

Operational Temperature	-40°C~+85°C
Storage Temperature	-50°C~+105°C
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Shock	20G for 11msec half sine wave, 3 axis both directions

Outline Drawing:

All Dimensions in mm (inches)

Tolerances $\pm 0.2(0.008)$



ID	Packing List	QTY
1	Fig a. USB/Ethernet Control RF Attenuator	1
2	Fig b. USB2.0 Cable (5 feet / 1.5 meter)	1
3	Fig c. Network Cable (6 feet / 2 meter)	1

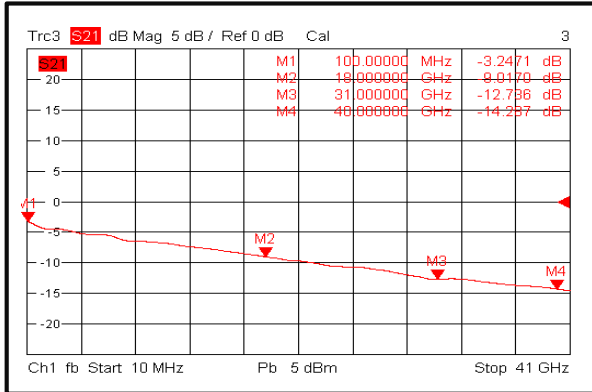


Fig b.

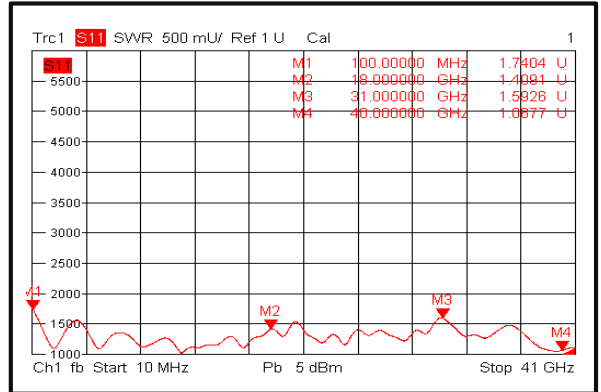


Fig c.

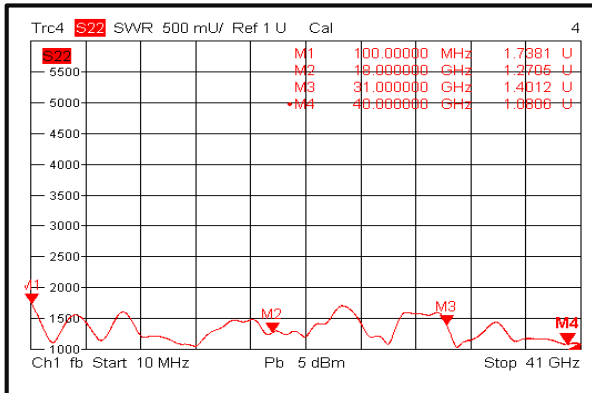
Insertion Loss @+25°C



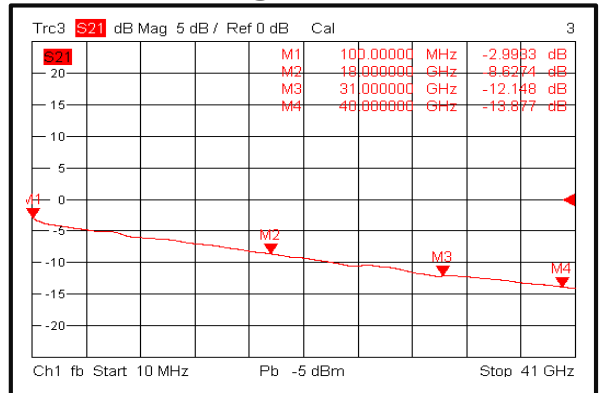
Input VSWR @+25°C



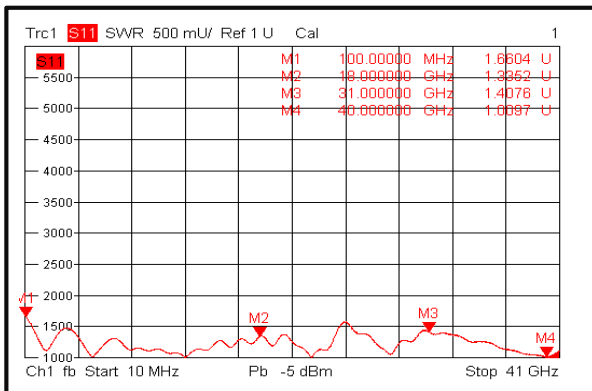
Output VSWR @+25°C



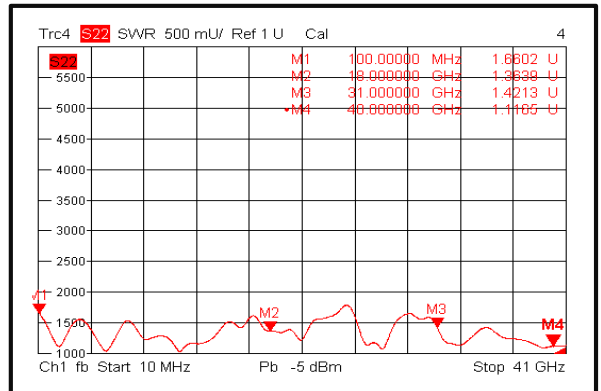
Insertion Loss @-40°C



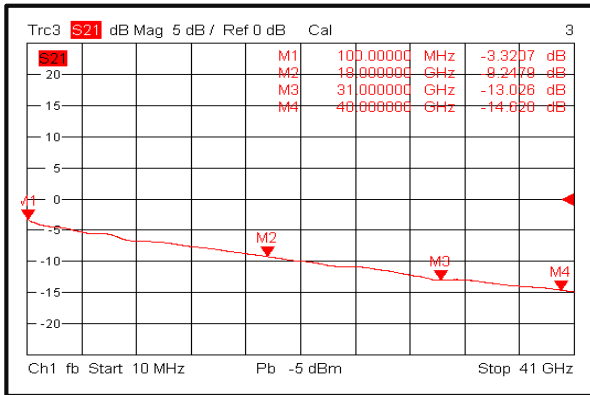
Input VSWR @-40°C



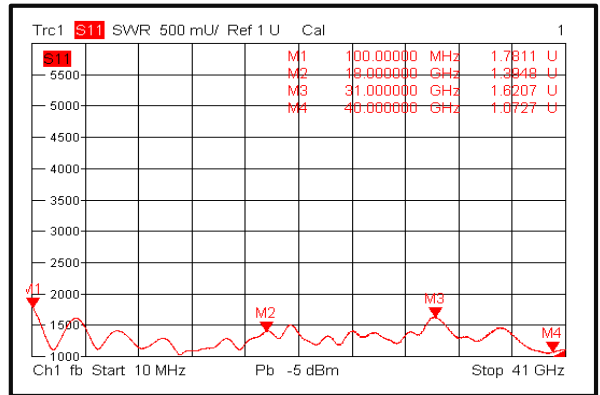
Output VSWR @-40°C



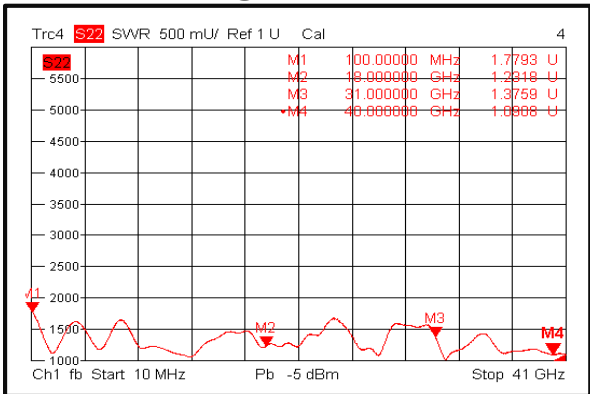
Insertion Loss @+85°C



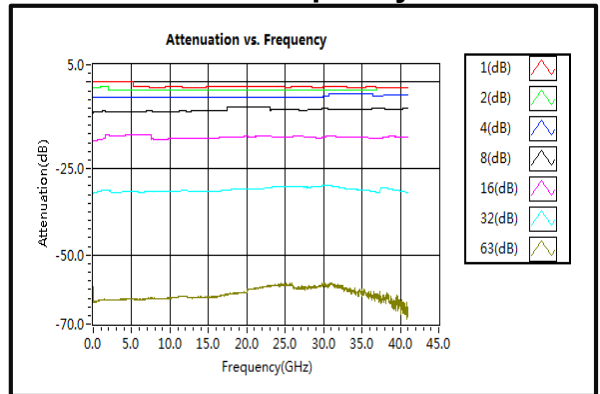
Input VSWR @+85°C



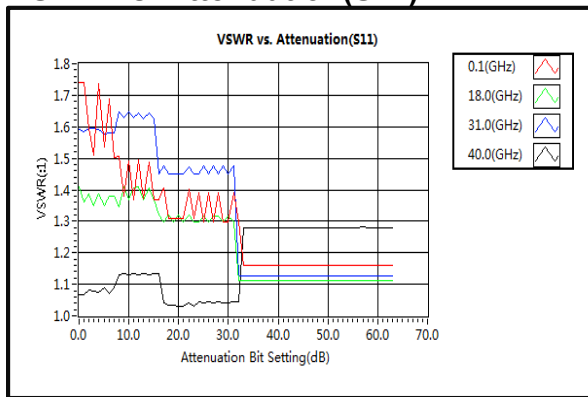
Output VSWR @+85°C



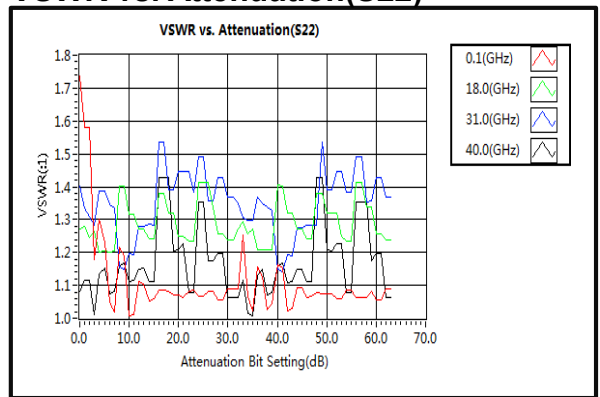
Attenuation vs. Frequency



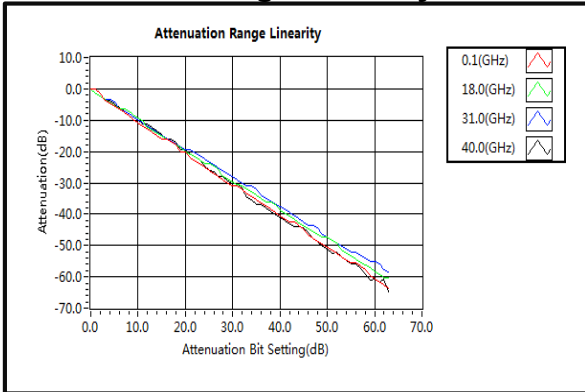
VSWR vs. Attenuation(S11)



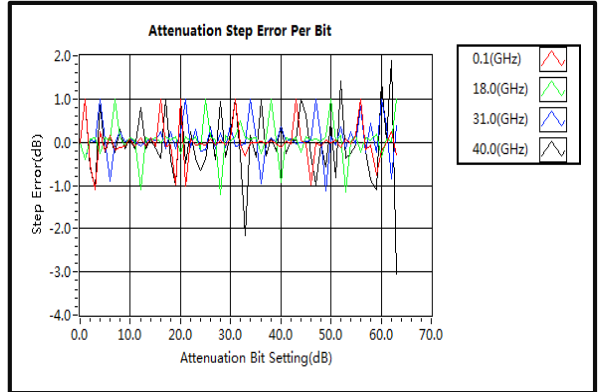
VSWR vs. Attenuation(S22)



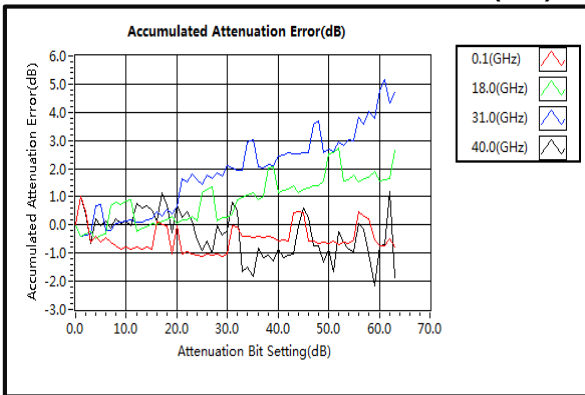
Attenuation Range Linearity



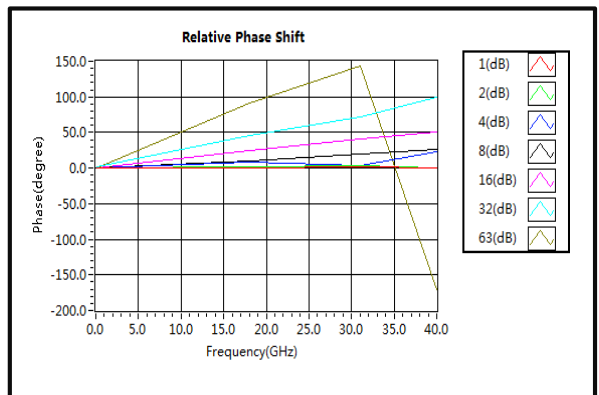
Attenuation Step Error Per Bit (dB)



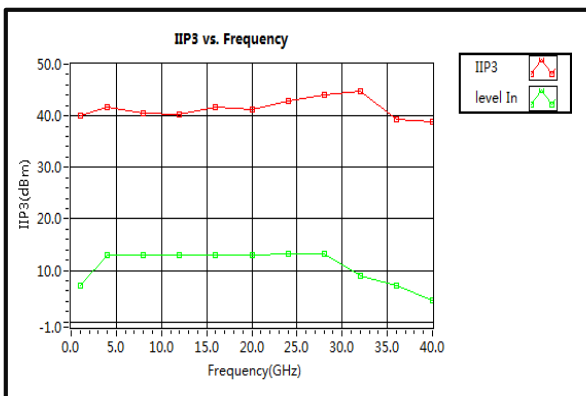
Accumulated Attenuation Error (dB)



Relative Phase Shift



IIP3



Control content description			
Format Requirement	USB (virtual serial port) Configuration	LAN Interface	Range of Parameters
a.All commands must end with a semicolon. b.All commands are case insensitive. c.Comma is used to separate multiple parameters in commands. d.All commands are suitable for USB(virtual serial port) and LAN interface.	Baud Rate :115200 Data bits : 8 Parity : None Stop bits : 1 Flow Type :None	IP address and Port. Default:192.168.1.225 :5100 Use 'USB Control Panel.exe' to set.	x(step):0~63.

Command specification				
ID	Order	Description	Return	Example
1	*IDN?;	Query product information	Product PN ,SN, Manufacturer , version	*IDN?;
2	AT:ATT x;	Set the Attenuation step	Step* stepsize	AT:ATT 2; Return : 2
3	AT:ATT?;	Query current step	Step,step*stepsize	AT:ATT?; Return :2,2
4	AT:ATTS?;	Query the stepsize	stepsize	AT:ATTS?; Return:1

Error code query		
ID	Return	Description
1	E1	Missing semicolon
2	E2	Missing space character
3	E3	Incorrect command
4	E4	Out of range parameters



