



PROGRAMMABLE ATTENUATOR DATA SHEET

DS 180

Model # QPA-2805990000 Job# 18741 S/N 1874100001

Band Ka Flange U-599/U Port WR-28

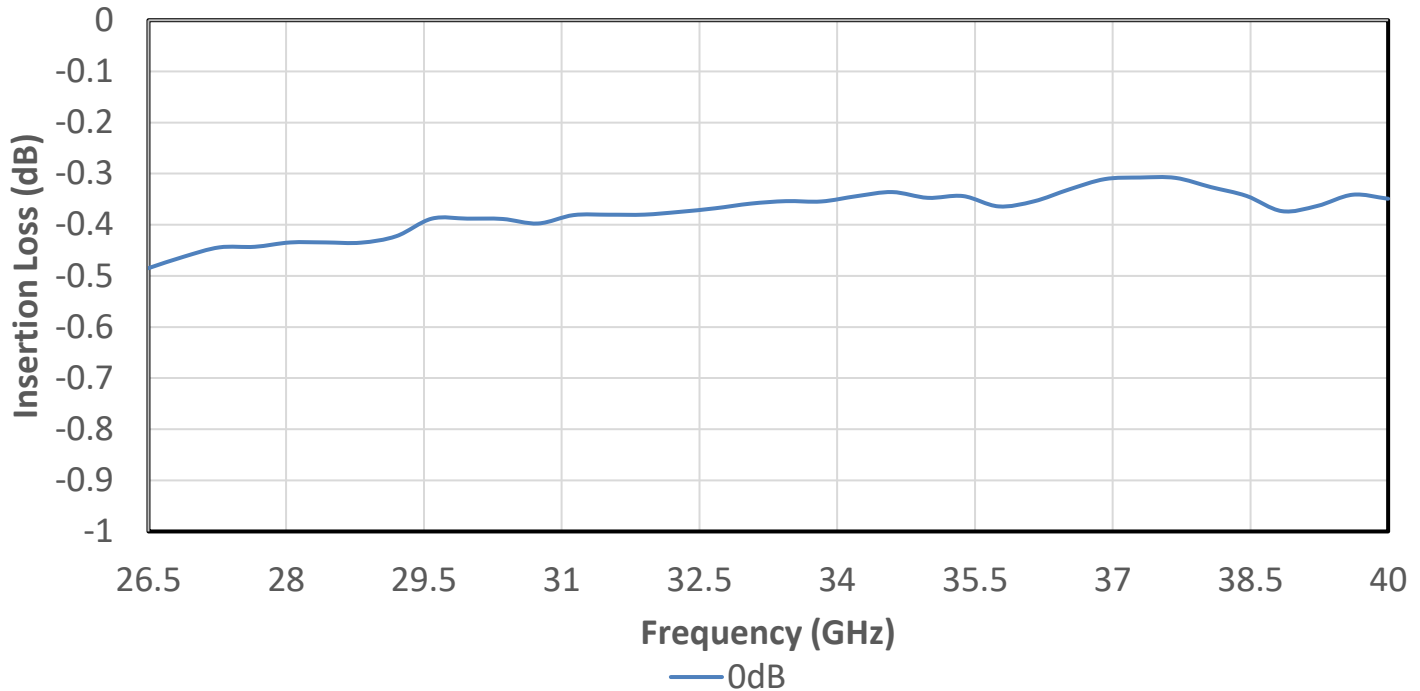
Specifications		Measured Data				
Parameter	Value (Typical)	Typical	Min	Max		Unit
Frequency Range	26.5-40	26.5-40	26.5	40		GHz
Attn. Range	0-80	0-80	0	95		dB
Step Size (0-40dB)	0.02	0.01	0.0001	0.1		dB
Step Size (50dB - max att.)	0.1	0.1	0.01	0.7		dB
Linearity @ center freq.	0.05	0.07	1	0.28		dB
Insertion Loss (min att.)	0.5	0.40	0.31	0.48		dB
Attn. Flatness	0.1	0.065	0.005	0.257		dB
VSWR (min att.)	1.2	1.15				
Max. Safe Power Handling	500	Pass				mW
Serial - RS485	SCPI enabled	Pass				
Serial - USB-C	SCPI enabled	Pass				
Serial - LAN	SCPI enabled	Pass				



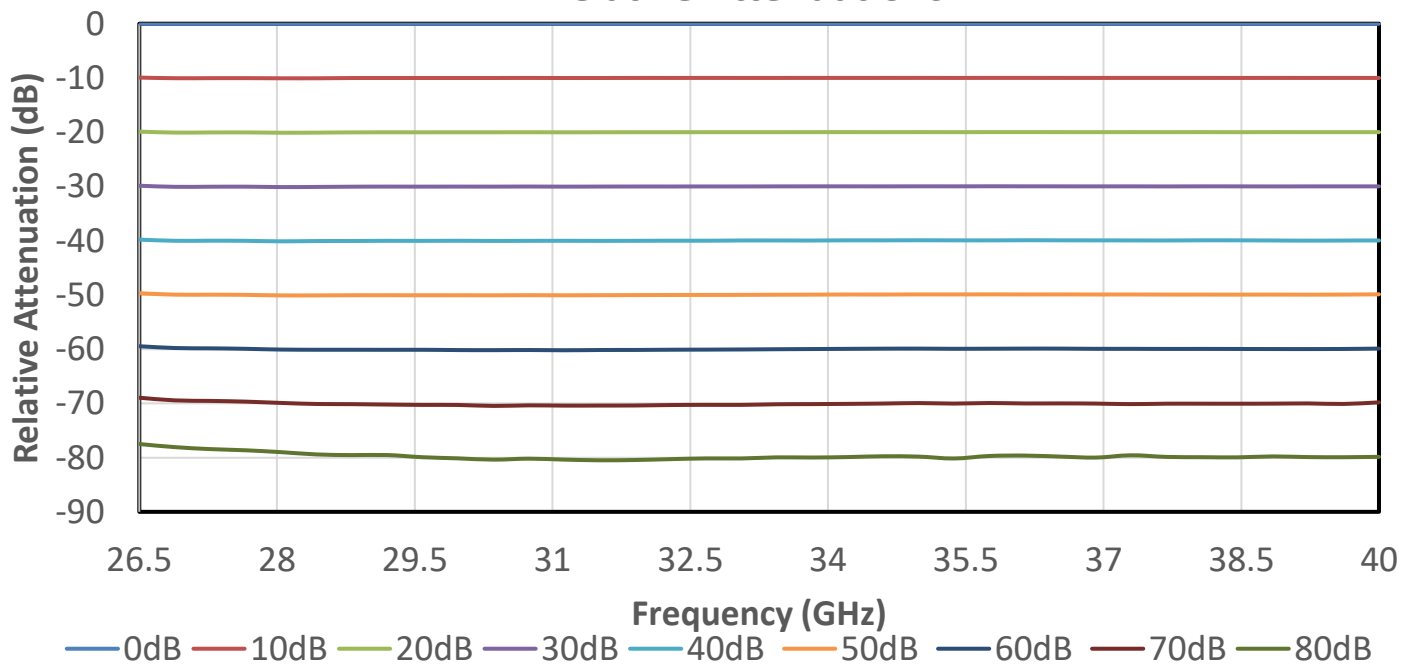
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Insertion Loss



Relative Attenuations

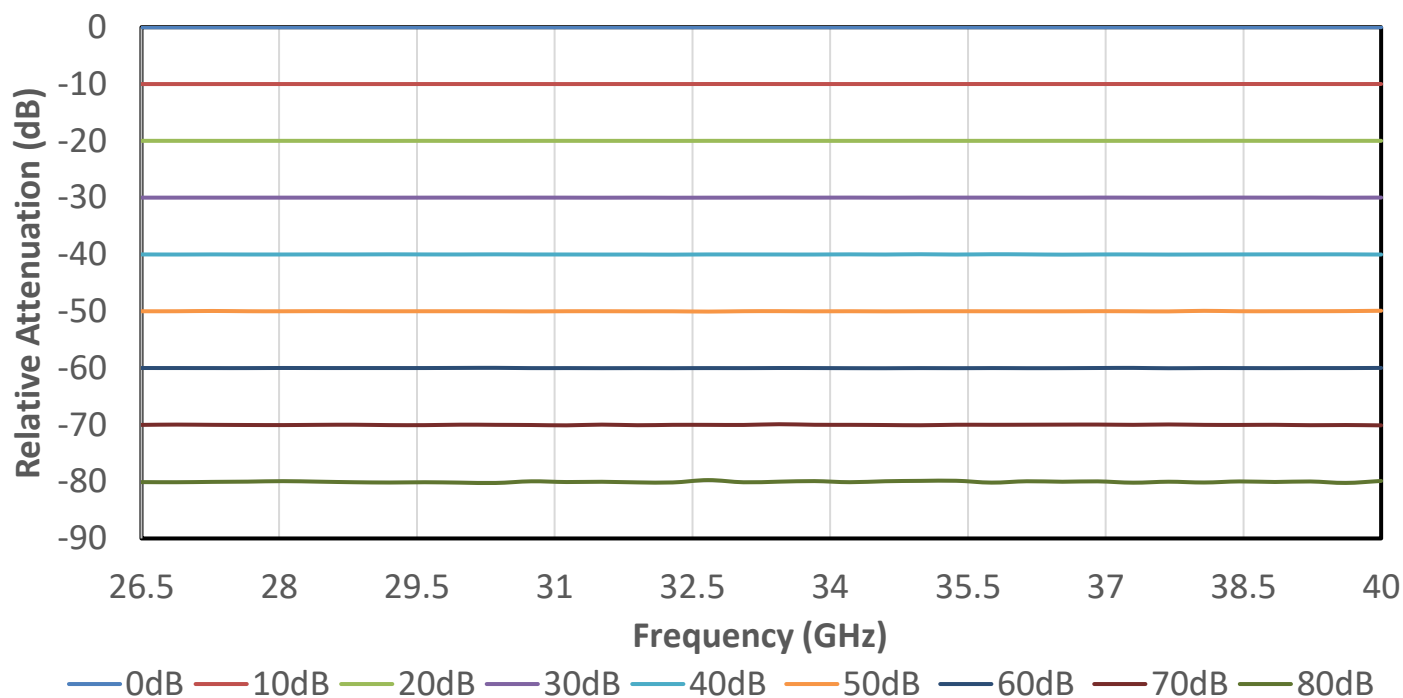




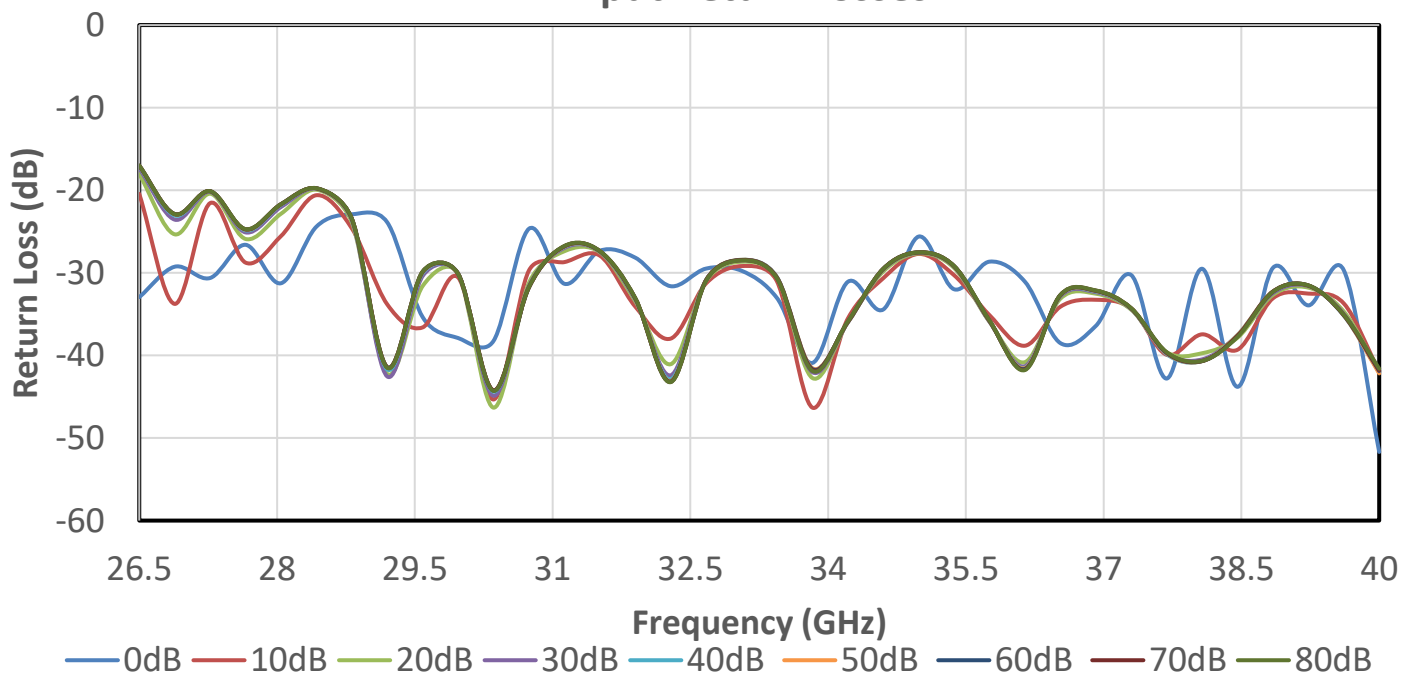
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Calibrated Attenuations



Input Return Losses

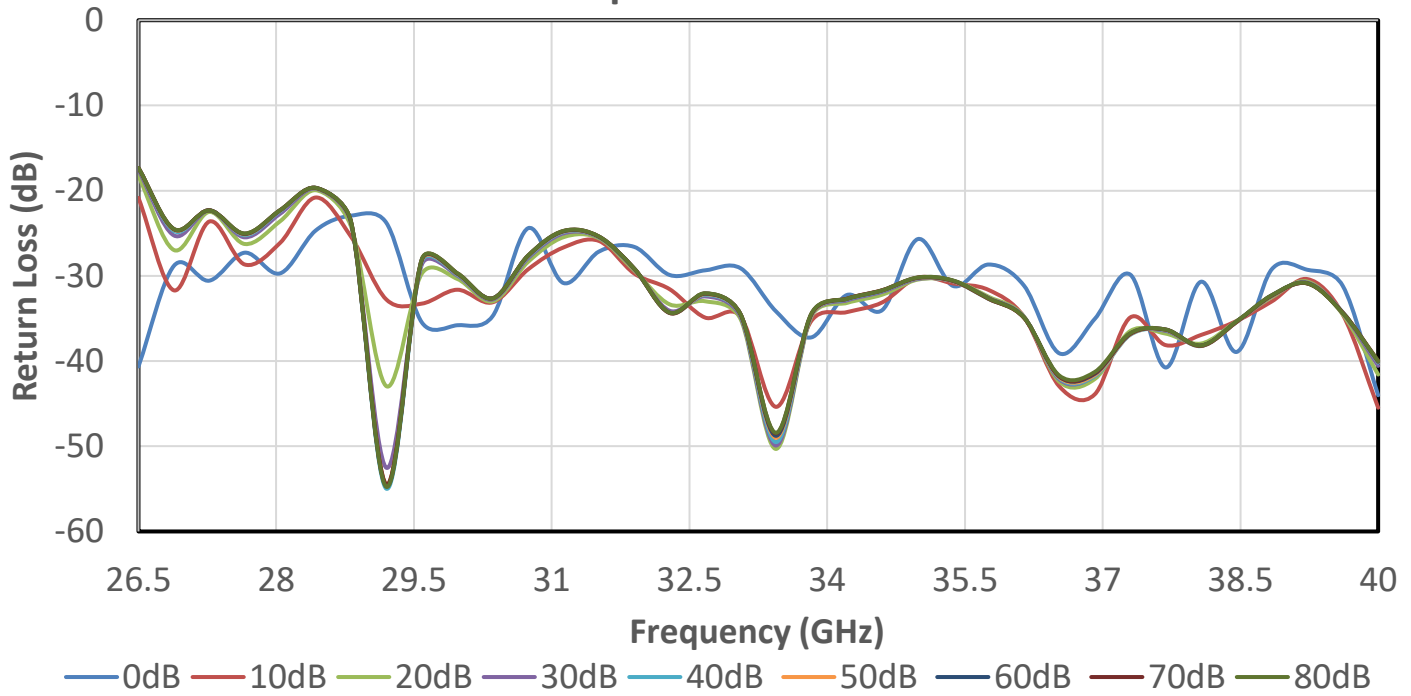




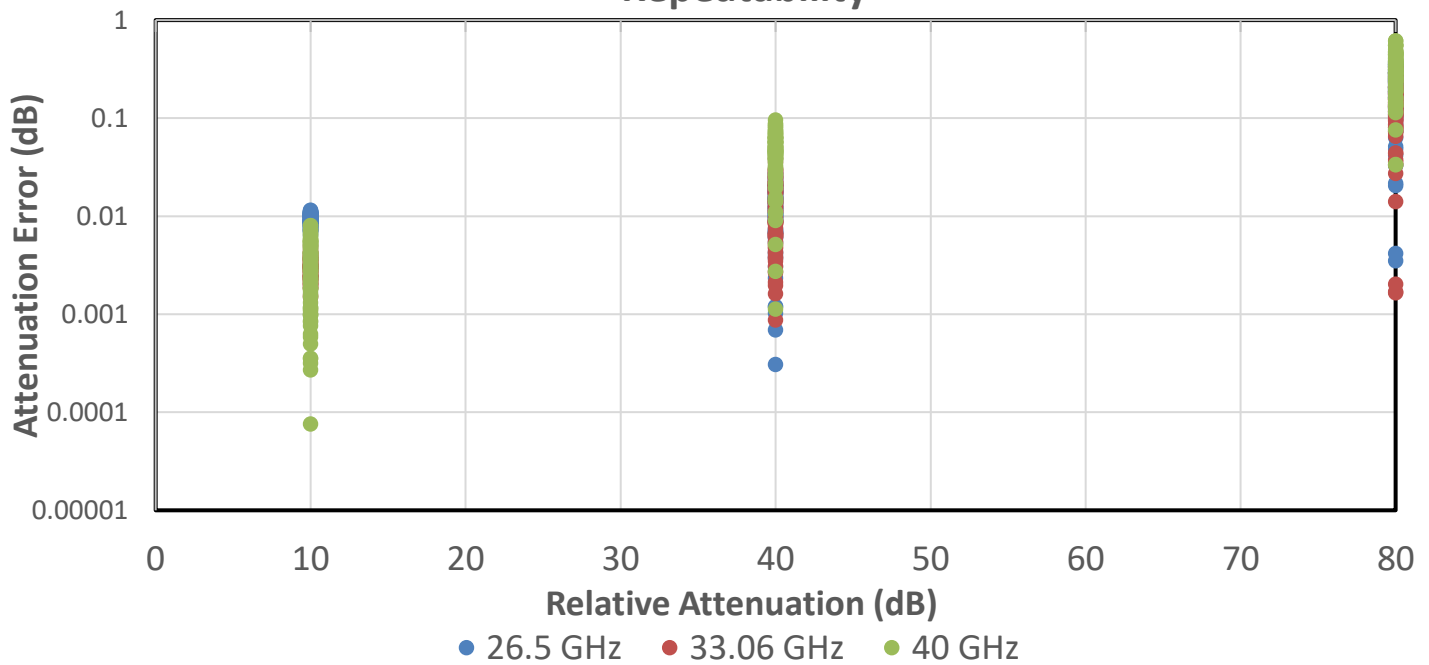
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Output Return Losses



Repeatability





PROGRAMMABLE ATTENUATOR

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Part # QPA-120387DEMO Job# 18741 S/N QPA-E-002

Band E Flange U-387/U Port WR-12

Specifications		Measured Data				
Parameter	Value (Typical)	Typical	Min	Max		Unit
Frequency Range	60-90	60-90	60	90		GHz
Attn. Range	0-70	0-70	0	80		dB
Step Size (0-40dB)	0.02	0.003	0.00003	0.01		dB
Step Size (40dB - max att.)	0.1	0.05	0.03	0.07		dB
Linearity @ center freq.	0.05	0.07	0.003	0.3		dB
Insertion Loss (min att.)*	1.2	1.53	1.40	1.66		dB
Attn. Flatness	0.2	0.18	0.06	0.73		dB
VSWR (min att.)*	1.2	1.23				
Max. Safe Power Handling	500	PASS				mW
Serial - RS485	SCPI enabled	PASS				
Serial - USB-C	SCPI enabled	PASS				
Serial - LAN	SCPI enabled	PASS				

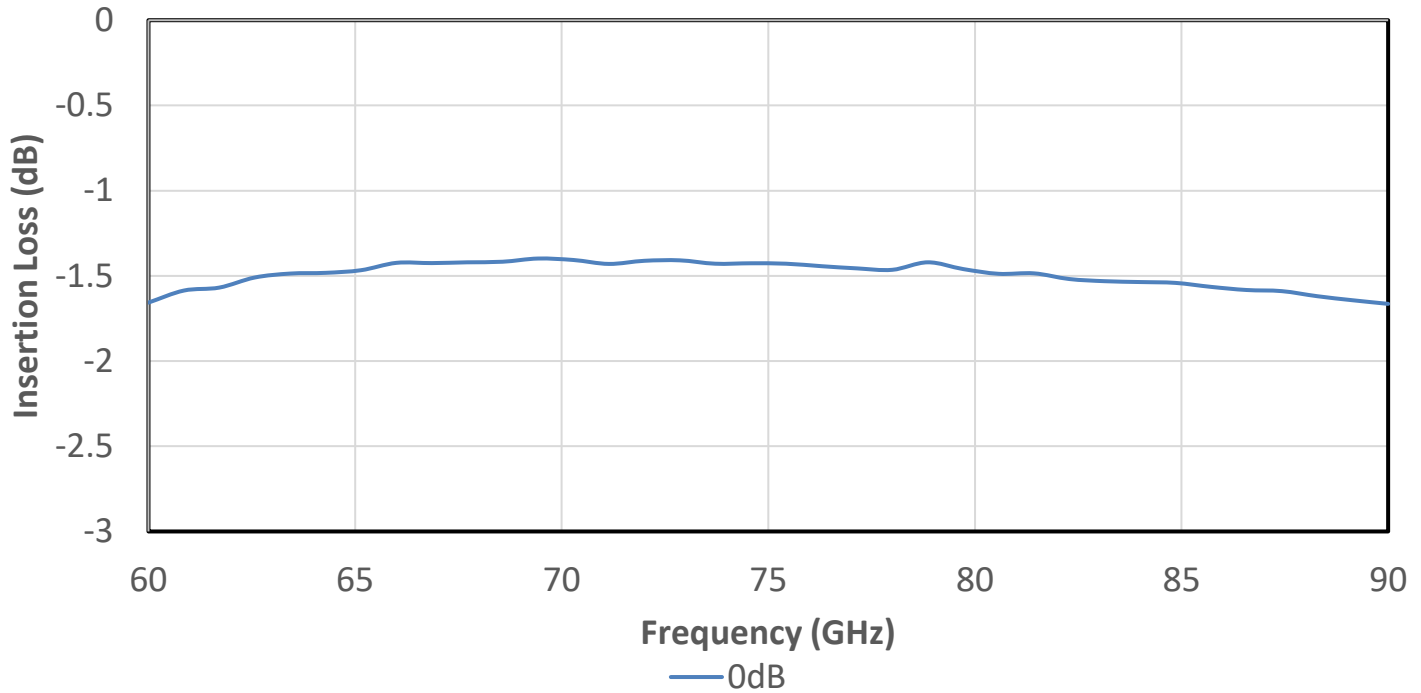
* This is a DEMO unit for evaluation purposes only. (The unit is not production grade.)



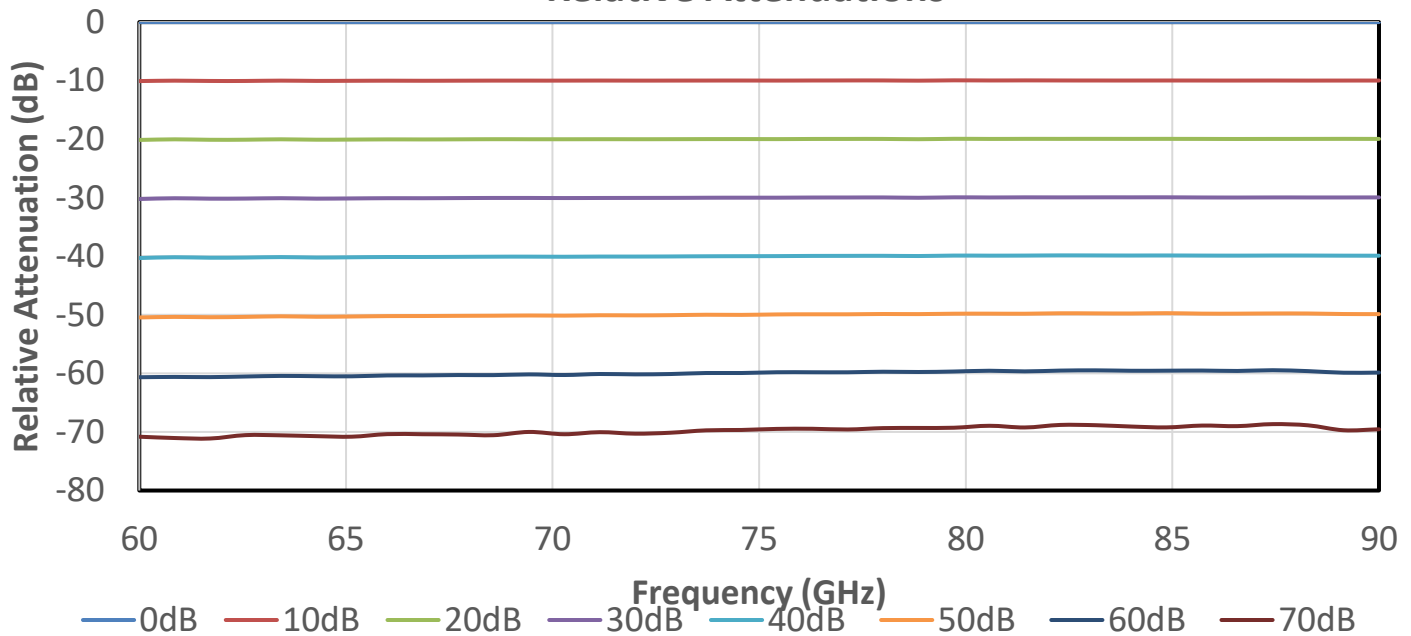
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Insertion Loss



Relative Attenuations



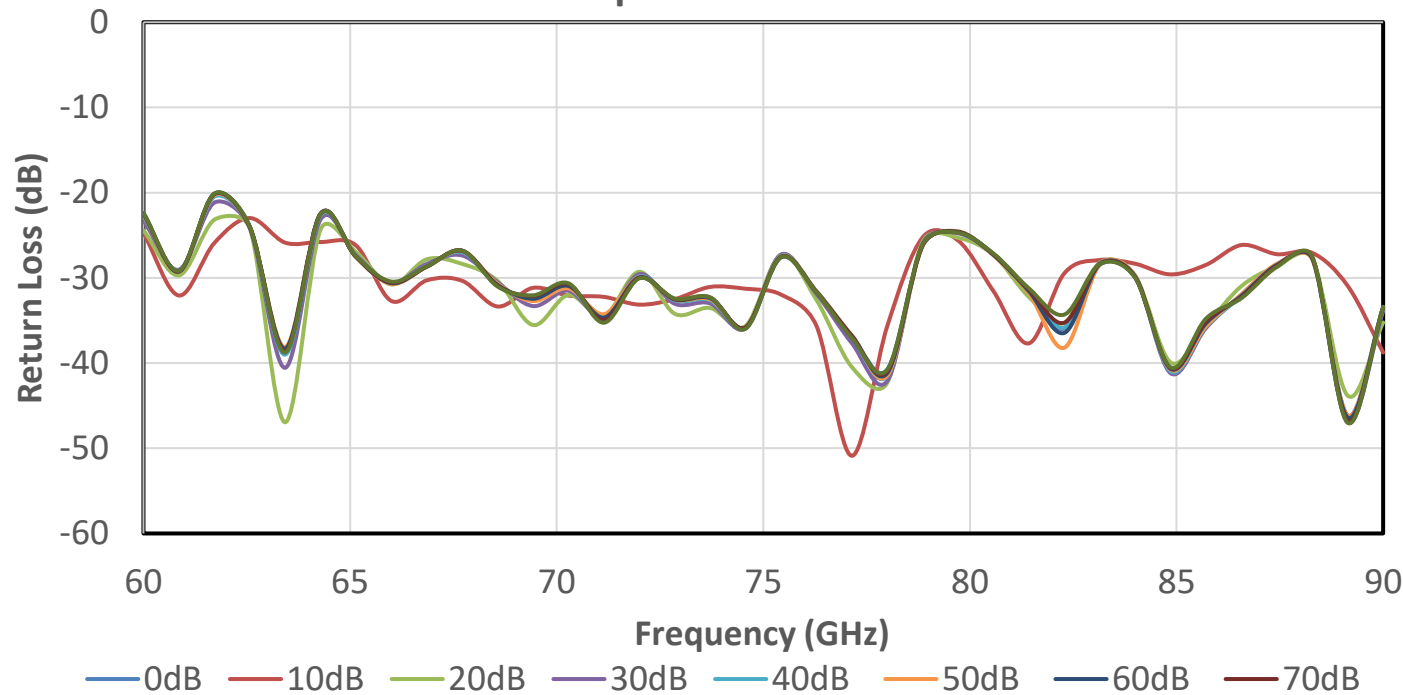


PROGRAMMABLE ATTENUATOR

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Output Return Losses





PROGRAMMABLE ATTENUATOR DATA SHEET

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Part # QPA-100387DEMO Job# 18741 S/N QPA-W-001

Band W Flange U-387/U-M Port WR-10

Specifications		Measured Data				
Parameter	Value (Typical)	Typical	Min	Max		Unit
Frequency Range	75-110	75-110	75	110		GHz
Attn. Range	0-70	0-70	0	80		dB
Step Size (0-40dB)	0.02	0.02	0.018	0.03		dB
Step Size (50dB - max att.)	0.1	0.01	0.0002	0.03		dB
Linearity @ center freq.	0.05	0.04	0.01	0.13		dB
Insertion Loss (min att.)*	2	3.93	3.55	4.31		dB
Attn. Flatness	0.1	0.086	0.04	0.32		dB
VSWR (min att.)*	1.2	1.34				
Max. Safe Power Handling	500	PASS				mW
Serial - RS485	SCPI enabled	PASS				
Serial - USB-C	SCPI enabled	PASS				
Serial - LAN	SCPI enabled	PASS				

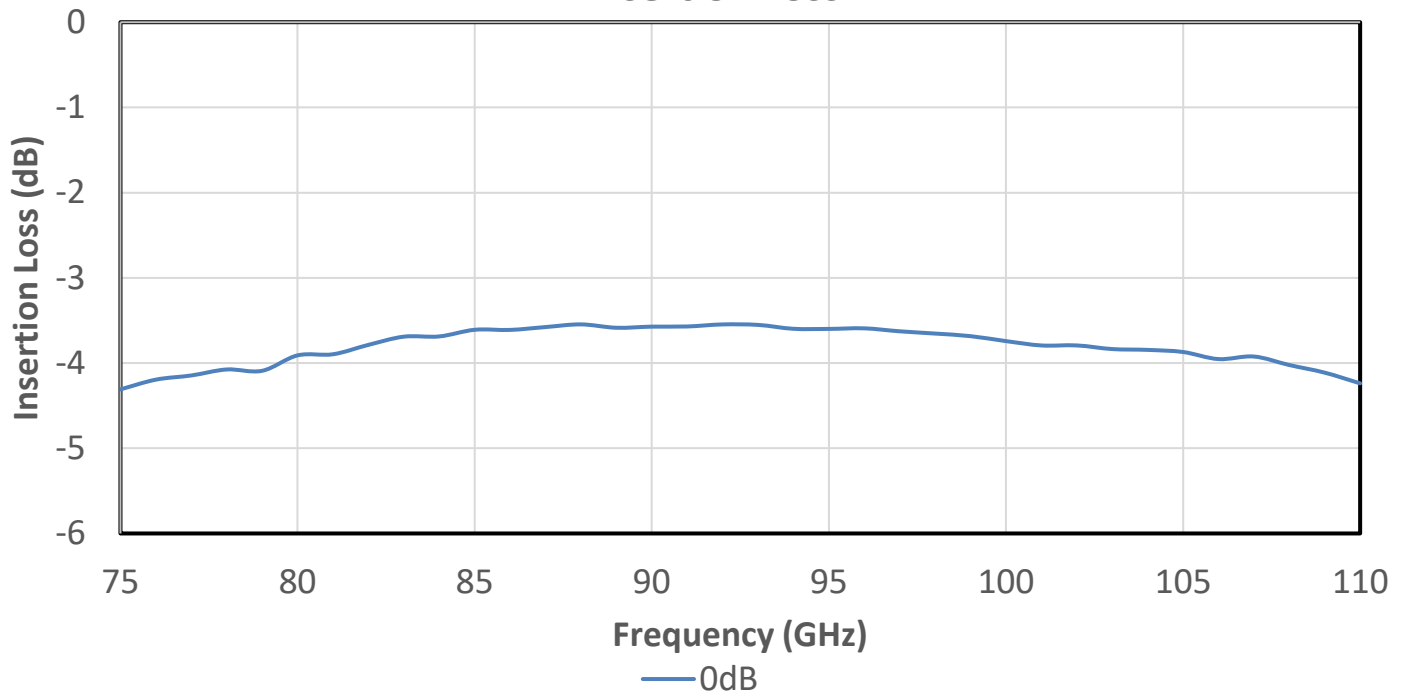
* This is a DEMO unit for evaluation purposes only. (The unit is not production grade.)



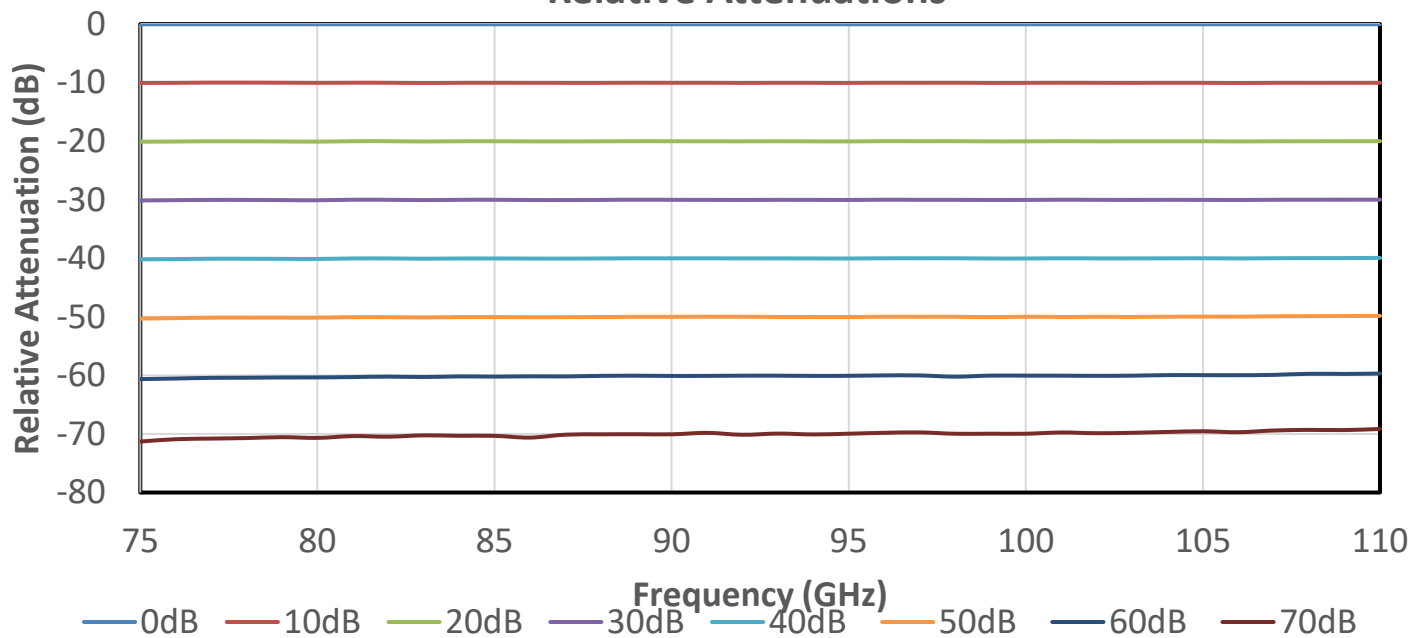
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Insertion Loss



Relative Attenuations

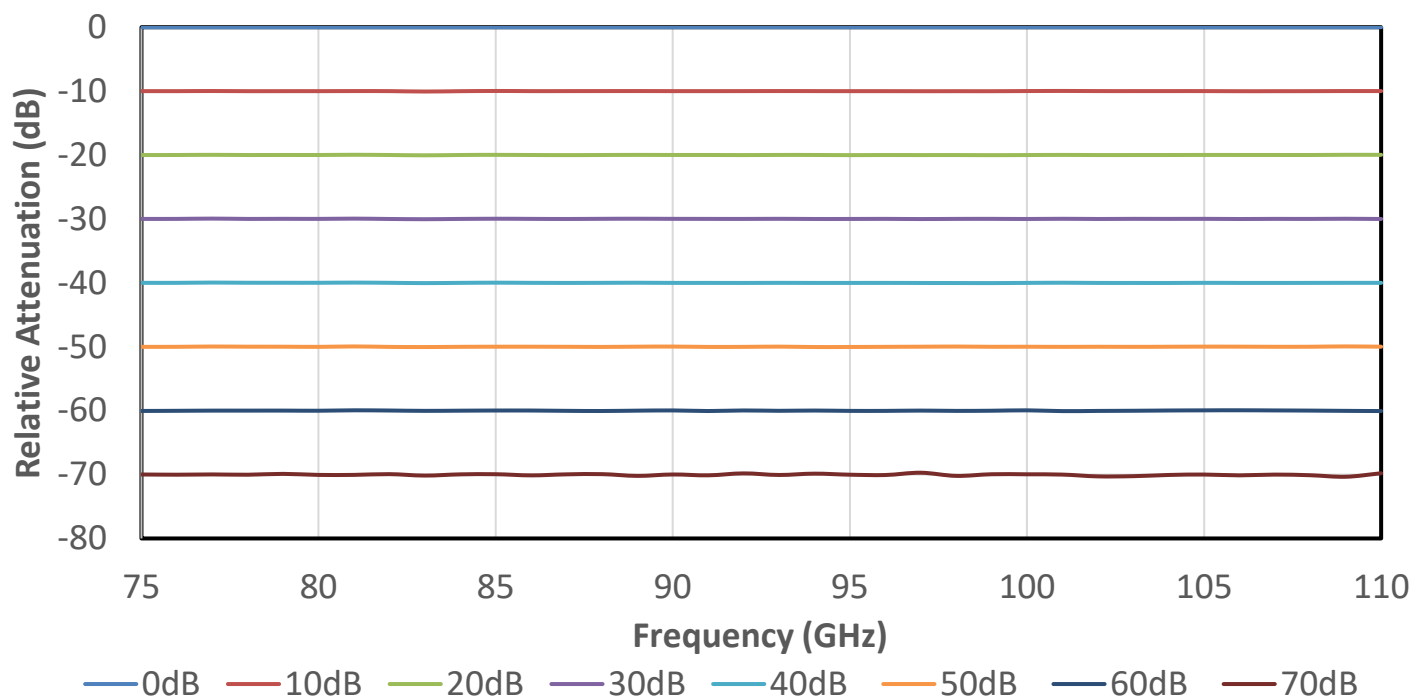




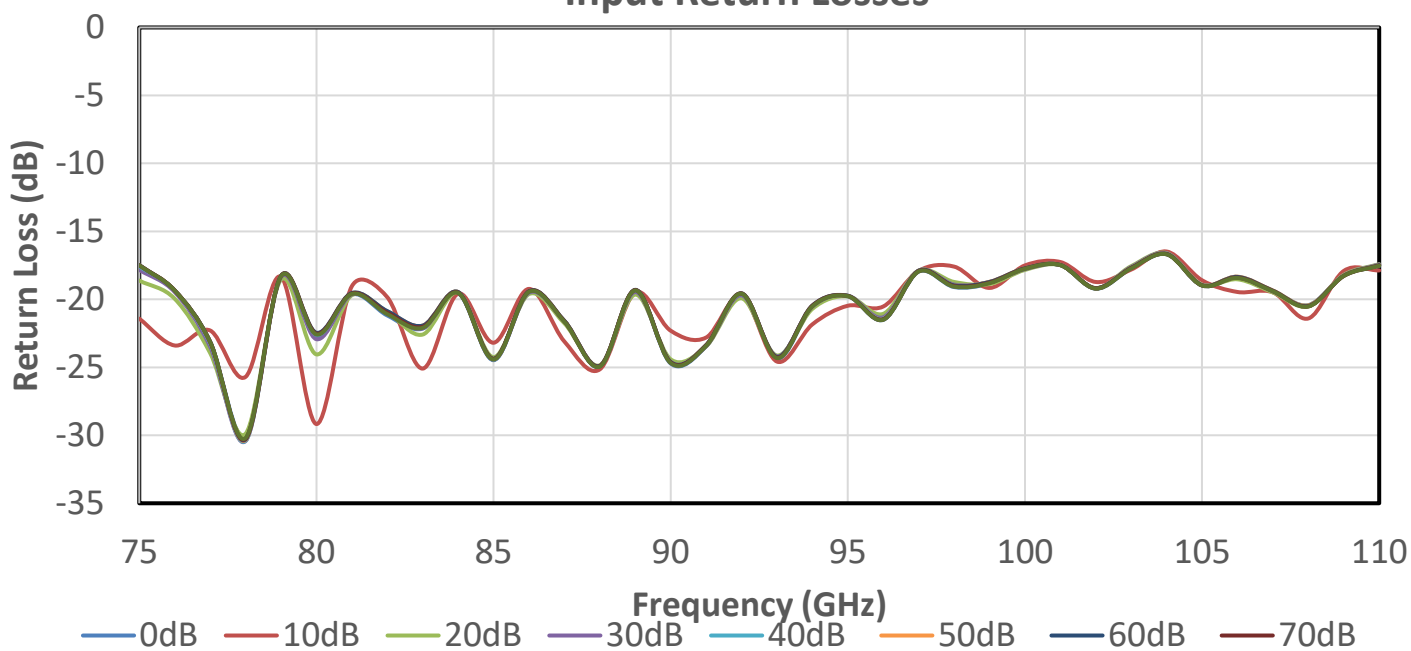
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Calibrated Attenuations



Input Return Losses





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Output Return Losses

