Qualwave

Digital Controlled Attenuator

QDA-9K-20000-31.75-0.25

9kHz~20GHz, 31.75dB, 0.25dB

Features:
* Broadband
* High Dynamic Range

Applications:
* Laboratory Test
* Telecommunication
* Wireless
* Instrumentation

Electrical

Frequency:	9kHz~20GHz
Insertion Loss:	4dB typ.
Step:	0.25dB
Attenuation Range:	0~31.75dB
Attenuation Accuracy:	±0.8dB typ.
Phase Shift:	±5° typ.
VSWR:	1.8 typ.
Voltage/Current:	-5V @10mA typ.
Switching Time:	20ns typ.
Logic Input:	On: 1(+2.3~+5V)
	Off: 0(0~+0.8V)

Absolute Maximum Ratings*1

Input Power:	+24dBm
Voltage:	+6V

[1] Permanent damage may occur if any of these limits are exceeded.

Mechanical

Size*2:	30*24*12mm
	1.181*0.945*0.472in
RF Connectors:	SMA Female (Removable)
Power Supply & Control Interface Connectors:	J30J-9ZKP
Mounting:	4-Φ2.8mm through-hole

[2] Exclude connectors.

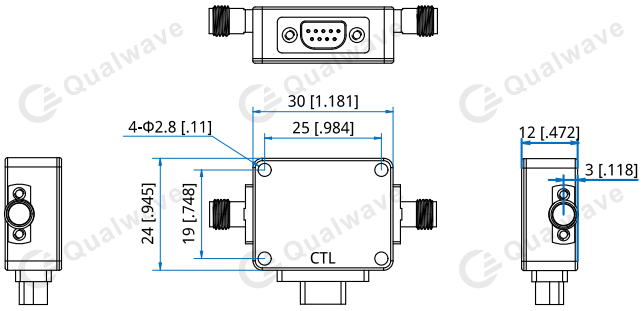
Pin Numbering

Pin	Function	Pin	Function
1	C1:-0.25dB	6	C6:-8dB
2	C2:-0.5dB	7	C7:-16dB
3	C3:-1dB	8	VEE
4	C4:-2dB	9	GND
5	C5:-4dB		

Environmental

Operating Temperature:	-45~+85℃
Non-operating Temperature:	-55~+125℃

Outline Drawings



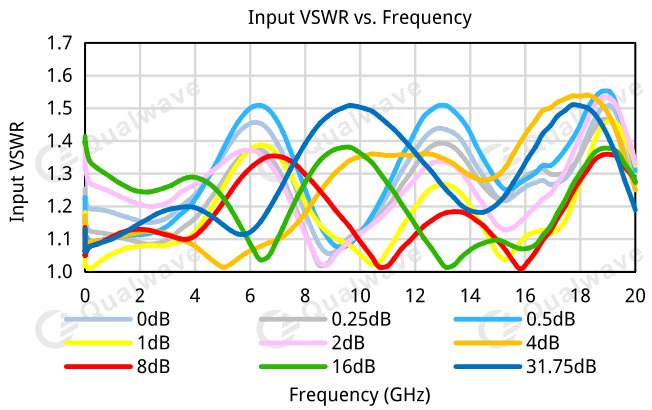
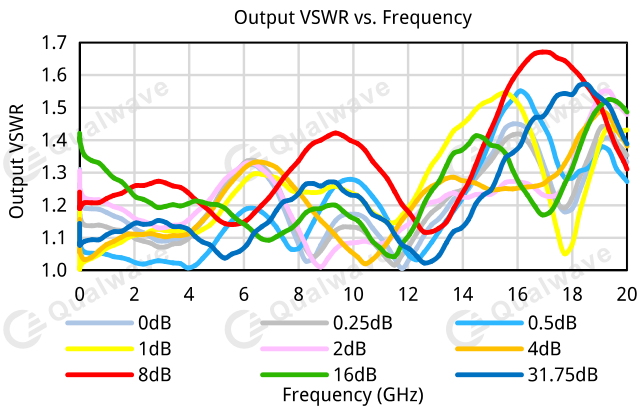
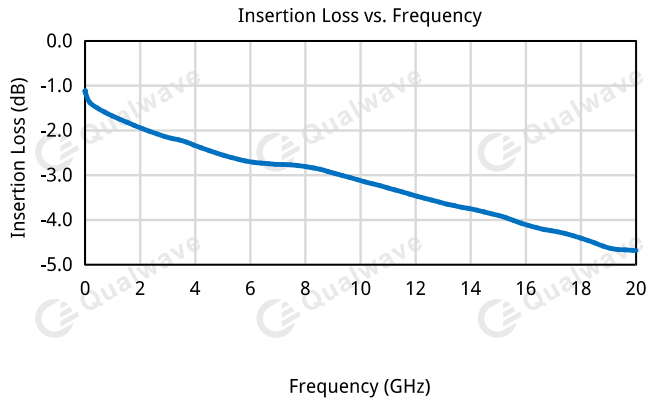
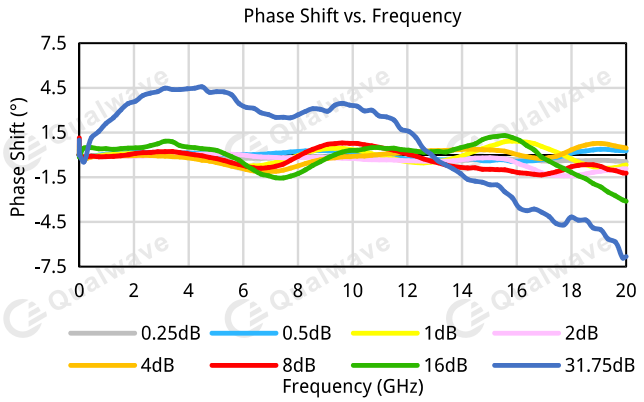
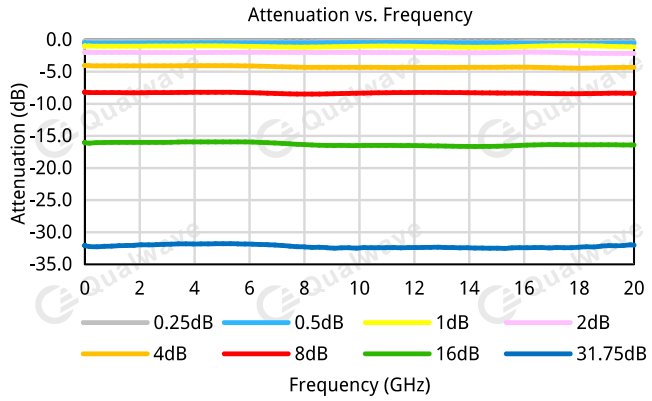
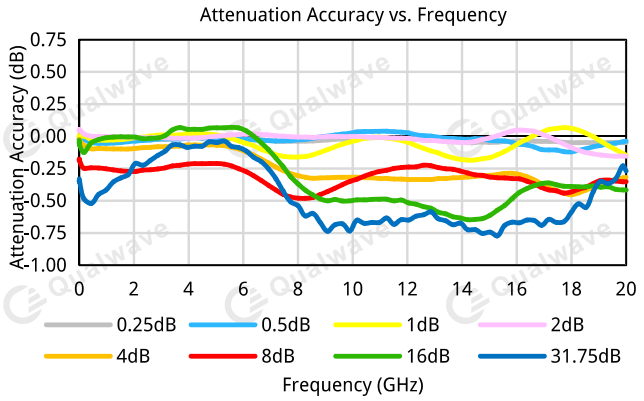
Unit: mm [in]
Tolerance: ±0.5mm [±0.02in]

Logic Table

State	C1	C2	C3	C4	C5	C6	C7	VEE	Attenuation State
-	0	0	0	0	0	0	0	-5V	Reference IL
1	1	0	0	0	0	0	0	-5V	0.25dB
2	0	1	0	0	0	0	0	-5V	0.5dB
3	0	0	1	0	0	0	0	-5V	1dB
4	0	0	0	1	0	0	0	-5V	2dB
5	0	0	0	0	1	0	0	-5V	4dB
6	0	0	0	0	0	1	0	-5V	8dB
7	0	0	0	0	0	0	1	-5V	16dB
8	1	1	1	1	1	1	1	-5V	31.75dB

How To Order

QDA-9K-20000-31.75-0.25

Customization is available upon request.

Typical Performance Curves