

YSDA-R1-18-63-S

0.1-18 GHz, 63 dB Digital Programmable Attenuator

Key Features

- Broadband operation from 0.1-18 GHz
- Up to 63 dB attenuation range
- 0.5 dB resolution with TTL parallel control
- Fast switching for dynamic apps
- Compact design for harsh environments

Applications

- RF Test & Measurement
- Automated RF Test Systems
- Signal Level Control & Conditioning
- Radar & EW Systems
- Microwave Communication Systems

Electrical Specifications

Parameter	Min.	Typ.	Max.	Unit
Frequency Range	0.1	-	18	GHz
Insertion Loss	-	-	9	dB
Attenuation Range	-	0-63	-	dB
Attenuation Step	-	0.5	-	dB
Control Interface	-	7-Bit TTL Parallel	-	-
Attenuation Accuracy			±5% of Attenuation Setting ¹	
Switching Time	-	-	100	ns
Input VSWR ²	-	-	1.8:1	-
Output VSWR ²	-	-	1.8:1	-
Maximum Input Power (No Damage)	-	-	+27	dBm
Supply Voltage	-	+5.0	-	VDC
Supply Current	-	-	0.1	A

Environmental Specifications

Parameter	Specification
Operating Temperature	-40°C to +70°C
Storage Temperature	-55°C to +70°C

Mechanical & Interface Specifications

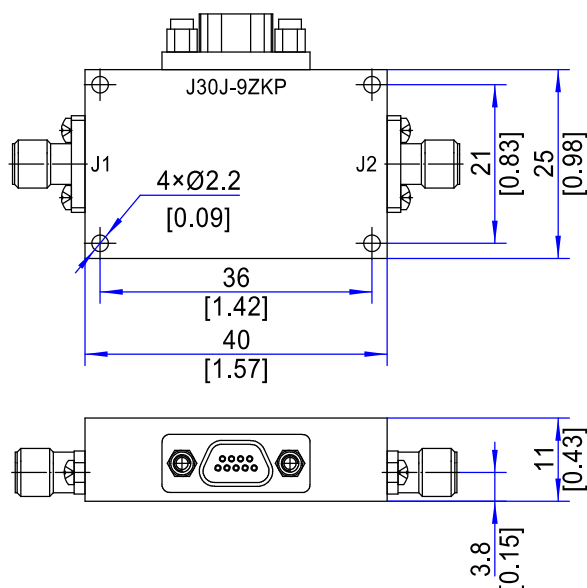
Parameter	Specification
RF Connectors	SMA Female
RF Input Port	J1
RF Output Port	J2
Power & Control Connector	J30J-9ZKP
Dimensions ³	40×25×11 mm
Surface Finish	Clear Conductive Oxide Finish

Control Connector Pin Assignment

Pin	Signal	Description
1	+5V	Positive Power Supply
2	GND	Ground
3	A0	0.5 dB Attenuation Control, LSB
4	A1	1 dB Attenuation Control

5	A2	2 dB Attenuation Control
6	A3	4 dB Attenuation Control
7	A4	8 dB Attenuation Control
8	A5	16 dB Attenuation Control
9	A6	32 dB Attenuation Control, MSB
Reliability		
Parameter	Specification	
MTBF	≥10,000 hours	
MTTR	≤1 hour	

Outline Drawing (Units: mm/[inch], Tolerance: ± 0.3 mm)



Note 1: Measured over the full operating temperature range.

Note 2: Measured at the 0 dB attenuation state.

Note 3: Dimensions exclude RF connectors.