

NPS1 SPST

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Specifications

Part Number	Frequency (GHz)	IL (dB Max.)	VSWR (Max.)	Isolation (dB Min.)	Power (W Max.)	On/Off Delay (nS Max.)
NPS1-20-1000	0.02~1	1	1.4	70	1	50
NPS1-1000-2000	1~2	1.2	1.4	70	1	50
NPS1-2000-6000	2~6	1.8	1.6	70	1	50
NPS1-8000-12000	8~12	1.8	1.6	70	1	50
NPS1-6000-18000	6~18	2	1.8	60	1	50
NPS1-18000-26500	18~26.5	2.5	2	60	1	50
NPS1-26500-40000	26.5~40	3	2	60	1	50

Mechanical

Size*1: 30*15*10mm
1.181*0.591*0.394in
RF Connectors: SMA Female
Power Supply Connectors: Feed Through/Terminal Post
Housing Material: Aluminum
Mounting: 2-Φ2.2mm through-hole

[1] Exclude connectors

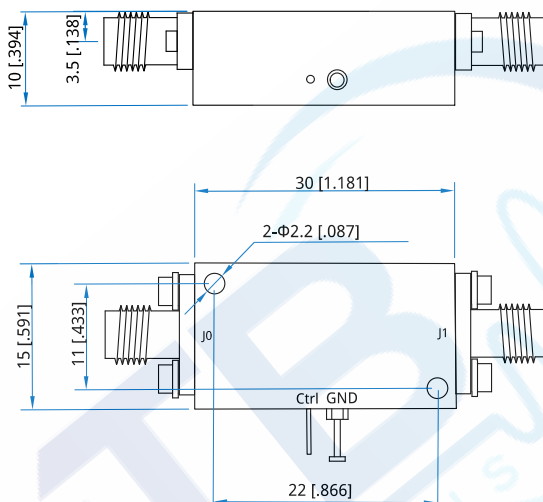
Electrical

Frequency: 0.02~40GHz
Control: TTL High - 1
TTL Low/NC - 0

Environmental

Operating Temperature: -40~+70°C
Non-operating Temperature: -55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	On
1	Off

How To Order

NPS1-X-Y-Z

X: Start frequency in MHz

Y: Stop frequency in MHz

Z: Absorptive: A, Reflective: R.

Examples:

To order an SPST PIN Diode Switch, 6~18GHz, reflective, specify NPS1-6000-18000-R.

Customization is available upon request.

NPS1-20000-40000-A

SPST, 20~40GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	20~40GHz
Insertion Loss:	6dB max.
Isolation:	40dB min.
VSWR:	2.5 max.
Input Power:	30dBm max.
On/Off Delay:	300nS max.
Voltage:	±8V
Current:	0.05A typ.
Control:	TTL High - 1
	TTL Low/NC - 0

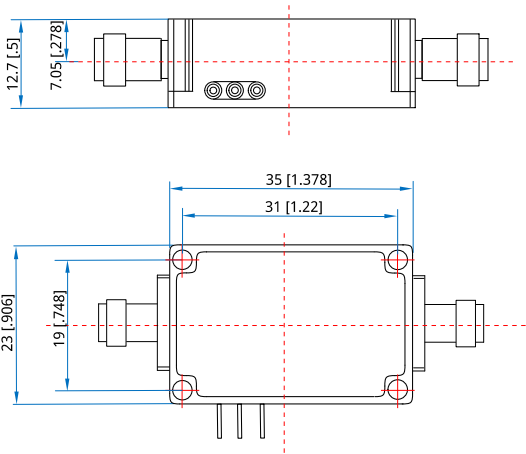
Mechanical

Size:	35*23*12.7mm
	1.378*0.906*0.5in
RF Connectors:	2.92mm Female

Environmental

Operating Temperature:	-20~+60°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

C	Connection
0	Off
1	On

How To Order

NPS1-20000-40000-A

Customization is available upon request.

NPS1-2000-18000-R

SPST, 2~18GHz, Reflective

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	2~18GHz
Insertion Loss:	3dB max.
Isolation:	55dB min.
VSWR:	2 max.
Power:	36dBm max.
On/Off Delay:	50nS max.
Voltage:	+5V DC
Current:	0.1A
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

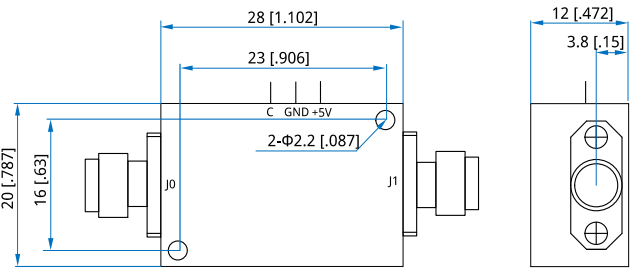
Size ^{*1} :	28*20*12mm
	1.102*0.787*0.472in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	2-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

C	Connection
0	Off
1	On

How To Order

NPS1-2000-18000-R

Customization is available upon request.

NPS1-2700-3100-A

SPST, 2.7~3.1GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	2.7~3.1GHz
Insertion Loss:	1.1dB max.
Isolation:	75dB min.
VSWR:	1.3 max.
Power:	30dBm max.
On/Off Delay:	100nS max.
Supply Voltage:	+5±0.5V -15±3V
Current:	0.05A max
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

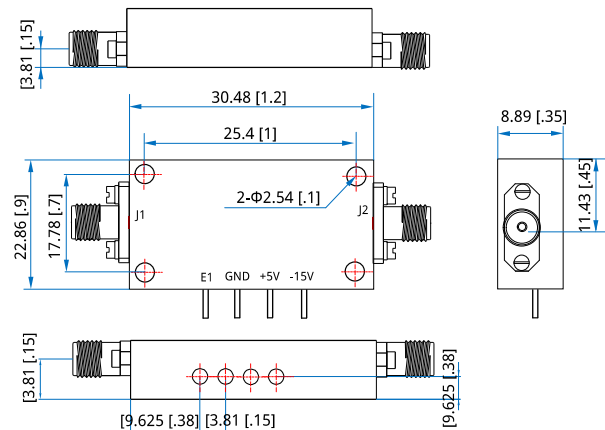
Size* ¹ :	30.48*22.86*8.89mm 1.2*0.9*0.35in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.55mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-50~+85°C
Non-operating Temperature:	-65~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C	Connection
0	Off
1	On

How To Order

NPS1-2700-3100-A

Customization is available upon request.

NPS1-500-18000-R

SPST, 0.5~18GHz, Reflective

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	0.5~18GHz
Insertion Loss:	2.5dB max.
Isolation:	70dB min.
VSWR:	1.8 max.
Power:	23dBm max.
On/Off Delay:	40nS max.
Supply Voltage:	±5±0.5V
Current:	0.05A max
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

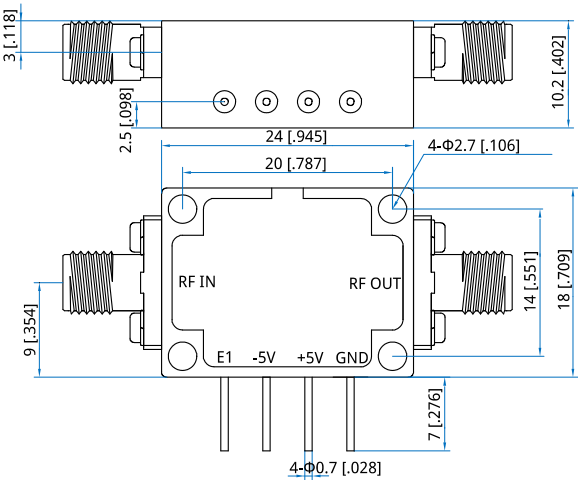
Size ^{*1} :	24*18*10.2mm
	0.945*0.709*0.402in
RF Connectors:	SMA Female
Material:	Aluminum
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

C	Connection
1	Off
0	On

How To Order

NPS1-500-18000-R

Customization is available upon request.

NPS1-6000-18000-R

SPST, 6~18GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	6~18GHz
Insertion Loss:	3.2dB max.
Isolation:	60dB min.
VSWR:	2 max.
Power:	23dBm max.
On/Off Delay:	50nS max.
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

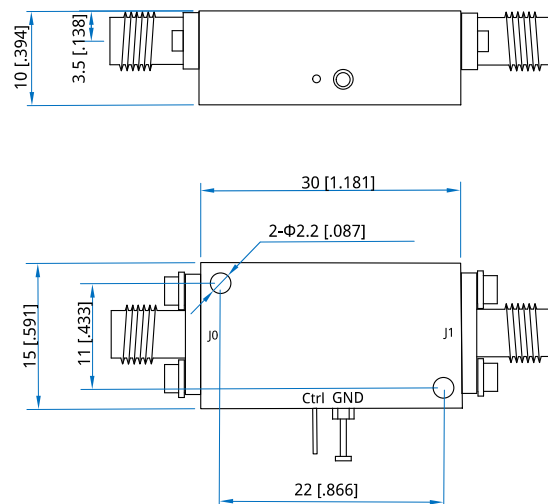
Size*1:	30*15*10mm
	1.181*0.591*0.394in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	2-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	On
1	Off

How To Order

NPS1-6000-18000-R

Customization is available upon request.

NPS16-10000-40000-R

SP16T, 10~40GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	10~40GHz
Insertion Loss:	15dB typ.
Isolation:	65dB typ.
VSWR:	2.5 max.
Voltage/Current:	+5V DC/650mA typ.
	-5V DC/150mA typ.
Switching Time:	100nS typ.
Average Power:	23dBm max.
Impedance:	50Ω

Mechanical

Size*1:	203.2*30*10.2mm
	8*1.181*0.402in
RF Connectors:	2.92mm female
Mounting:	4-Φ2.8mm through-hole

[1] Exclude connectors.

Environmental

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

Control True Table

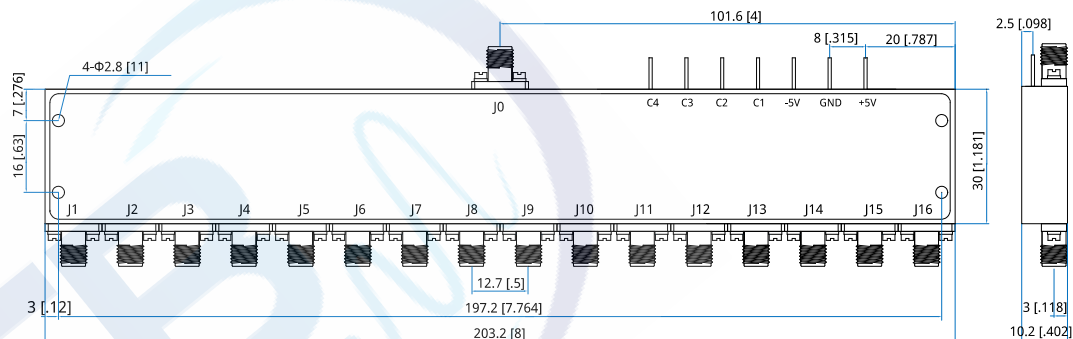
C4	C3	C2	C1	Connection
0	0	0	0	J0 - J1 On
0	0	0	1	J0 - J2 On
0	0	1	0	J0 - J3 On
0	0	1	1	J0 - J4 On
0	1	0	0	J0 - J5 On
0	1	0	1	J0 - J6 On
0	1	1	0	J0 - J7 On
0	1	1	1	J0 - J8 On
1	0	0	0	J0 - J9 On
1	0	0	1	J0 - J10 On
1	0	1	0	J0 - J11 On
1	0	1	1	J0 - J12 On
1	1	0	0	J0 - J13 On
1	1	0	1	J0 - J14 On
1	1	1	0	J0 - J15 On
1	1	1	1	J0 - J16 On

How To Order

NPS16-10000-40000-R

Customization is available upon request.

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

NPS16-100-1000-R

SP16T, 0.1~1GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~1GHz
Insertion Loss:	2dB max.
Isolation:	40dB min.
VSWR:	1.5 max.
Voltage:	+28V, +5V DC
Current:	300mA, 300mA
On/Off Delay:	2uS max.
Average Power:	40dBm max.
Impedance:	50Ω

Mechanical

Size*1:	50*105*15mm
	1.969*4.134*0.591in
RF Connectors:	SMA Female
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

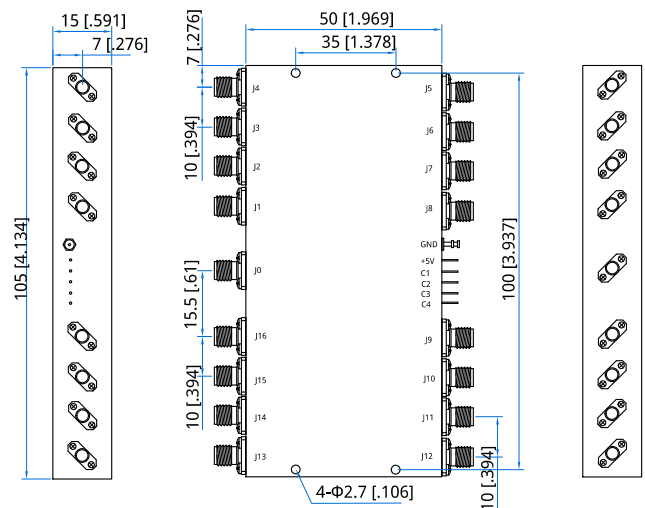
Environmental

Operating Temperature:	-40~+70°C
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Control True Table

C4	C3	C2	C1	Connection
0	0	0	0	J0 - J1 On
0	0	0	1	J0 - J2 On
0	0	1	0	J0 - J3 On
0	0	1	1	J0 - J4 On
0	1	0	0	J0 - J5 On
0	1	0	1	J0 - J6 On
0	1	1	0	J0 - J7 On
0	1	1	1	J0 - J8 On
1	0	0	0	J0 - J9 On
1	0	0	1	J0 - J10 On
1	0	1	0	J0 - J11 On
1	0	1	1	J0 - J12 On
1	1	0	0	J0 - J13 On
1	1	0	1	J0 - J14 On
1	1	1	0	J0 - J15 On
1	1	1	1	J0 - J16 On

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS16-100-1000-R

Customization is available upon request.

NPS2

SPDT

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Specifications

Part Number	Frequency (GHz)	IL (dB Max.)	VSWR (Max.)	Isolation (dB Min.)	Power (W Max.)	On/Off Delay (nS Max.)
NPS2-20-1000	0.02~1	1	1.4	70	1	50
NPS2-1000-2000	1~2	1.2	1.4	70	1	50
NPS2-2000-6000	2~6	1.8	1.6	70	1	50
NPS2-8000-12000	8~12	1.8	1.6	70	1	50
NPS2-6000-18000	6~18	2	1.8	60	1	50
NPS2-18000-26500	18~26.5	2.5	2	60	1	50
NPS2-26500-40000	26.5~40	3	2	60	1	50

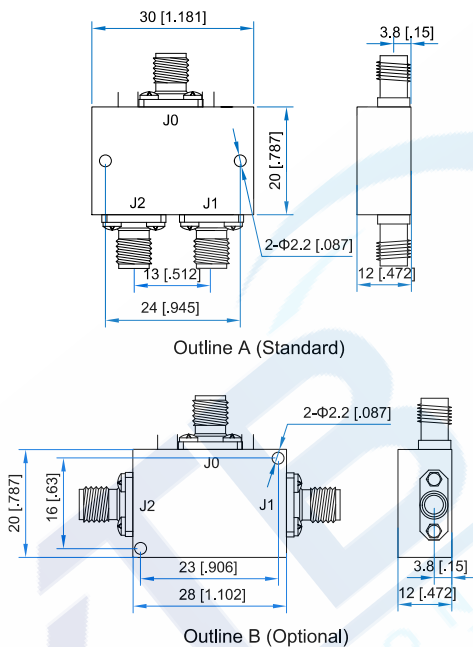
Mechanical

RF Connectors: SMA Female
Power Supply Connectors: Feed Through/Terminal Post
Housing Material: Aluminum
Mounting: 2-Φ2.2mm through-hole

Electrical

Frequency: 0.02~40GHz
Control: TTL High - 1
TTL Low/NC - 0

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Environmental

Operating Temperature: -40~+70°C
Non-operating Temperature: -55~+85°C

Control True Table

Ctrl	Connection
0	J0 - J1 On
1	J0 - J2 On

How To Order

NPS2-X-Y-Z

X: Start frequency in MHz
Y: Stop frequency in MHz
Z: Absorptive: A, Reflective: R.

Add suffix “-O” for Outline B.

Examples:

To order an SPDT PIN Diode Switch, 6~18GHz, reflective, specify NPS2-6000-18000-R.

Customization is available upon request.

NPS2-0.95-200-A

SP2T, 0.95~200MHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.95~200MHz
Insertion Loss:	1dB max.
Isolation:	40dB min.
VSWR:	1.5 max.
100MHz In-band Flatness:	0.3dB max.
Power Without Damage:	2W
Impedance:	50Ω
Voltage:	+5V DC
Current:	200mA max.
Control:	TTL logic
	High: locked
	Low: unlocked

Mechanical

Size*1:	36*25*13mm 1.417*0.984*0.512in
Switching Time:	1uS max.
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

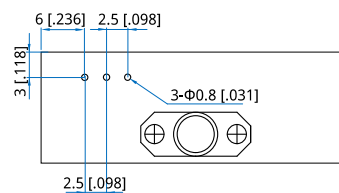
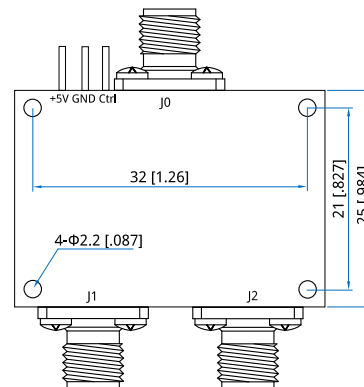
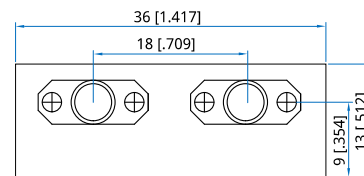
Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Control True Table

Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J2 On, J0 - J1 Off

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS2-0.95-200-A

Customization is available upon request.

NPS2-0.95-200-A

SP2T, 0.95~200MHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.95~200MHz
Insertion Loss:	1dB max.
Isolation:	40dB min.
VSWR:	1.5 max.
100MHz In-band Flatness:	0.3dB max.
Power Without Damage:	2W
On/Off Delay:	1uS max.
Impedance:	50Ω
Voltage:	+5V DC
Current:	200mA max.
Control:	TTL logic
	High: locked
	Low: unlocked

Mechanical

Size*1:	36*25*13mm 1.417*0.984*0.512in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

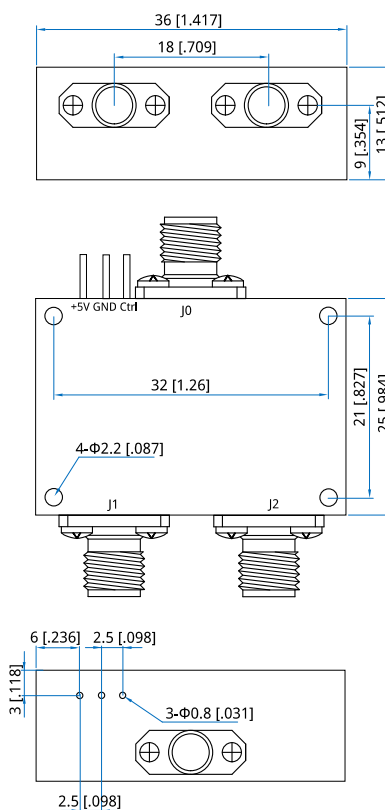
Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Control True Table

Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J2 On, J0 - J1 Off

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS2-0.95-200-A

Customization is available upon request.

NPS2-0-3000-R

SPDT, DC~3GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	DC~3GHz
Insertion Loss:	1dB max.
Isolation:	31dB min.
VSWR:	1.3 max.
Input Power:	46dBm max.
DC Power Dissipation:	0.7W typ.
P0.1dB:	46dBm typ.
IIP3:	55dBm typ.
Impedance:	50Ω
Voltage:	+5V DC
Current:	100mA max.
On/Off Delay:	150nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

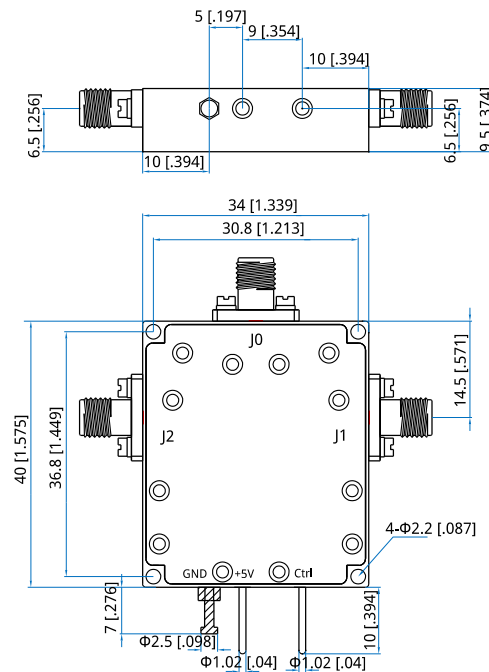
Size*1:	40*34*9.5mm 1.575*1.339*0.374in
Weight:	37g max.
Material:	Aluminum
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-50~+105°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J2 On, J0 - J1 Off
1	J0 - J1 On, J0 - J2 Off

How To Order

NPS2-0-3000-R

Customization is available upon request.

NPS2-0-6000-R

SPDT, DC~6GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	DC~6GHz
Insertion Loss:	1.3dB max.
Isolation:	23dB min.
VSWR:	1.5 max.
Input Power:	46dBm max.
DC Power Dissipation:	0.7W typ.
P0.1dB:	46dBm typ.
IIP3:	55dBm typ.
Impedance:	50Ω
Voltage:	+5V DC
Current:	100mA
On/Off Delay:	150nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

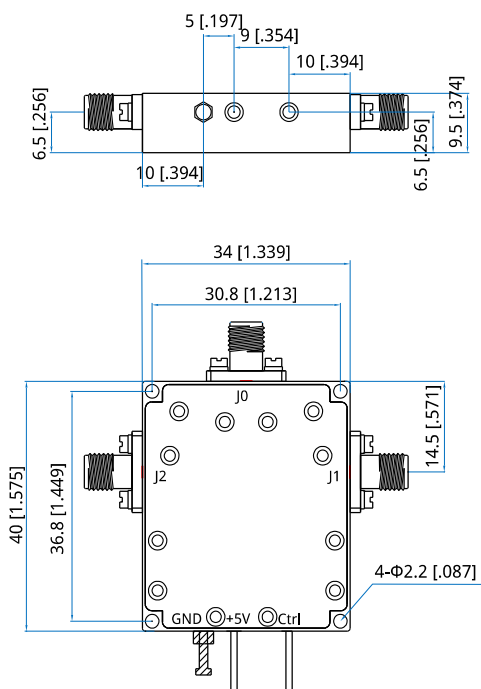
Size*1:	40*34*9.5mm 1.575*1.339*0.374in
Weight:	37g max.
Material:	Aluminum
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J2 On, J0 - J1 Off
1	J0 - J1 On, J0 - J2 Off

How To Order

NPS2-0-6000-R

Customization is available upon request.

NPS2-1000-18000-A

SPDT, 1~18GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	1~18GHz
Insertion Loss:	3dB max.
Isolation:	55dB min.
VSWR:	2 max.
Average Power:	0.5W max.
Switching Time:	100ns max.
Voltage/Current:	5V/50mA max.
Impedance:	50Ω
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

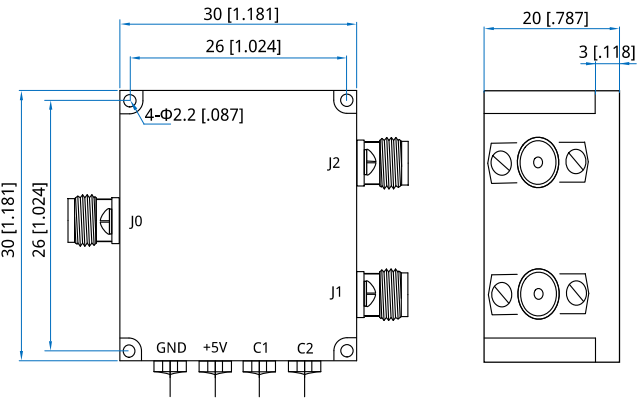
Size*1:	30*30*20mm 1.181*1.181*0.787in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	Connection
0	0	J0 - J2 On
1	0	J0 - J1 On
0	1	Off
1	1	Off

How To Order

NPS2-1000-18000-A

Customization is available upon request.

NPS2-1000-26500-R

SPDT, 1~26.5GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~26.5GHz
Insertion Loss:	4.5dB max.
Isolation:	30dB typ.
VSWR:	2.3 max.
Input Power:	0.2W max.
Voltage:	+12V DC
Current:	80mA max.
On/Off Delay:	500nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

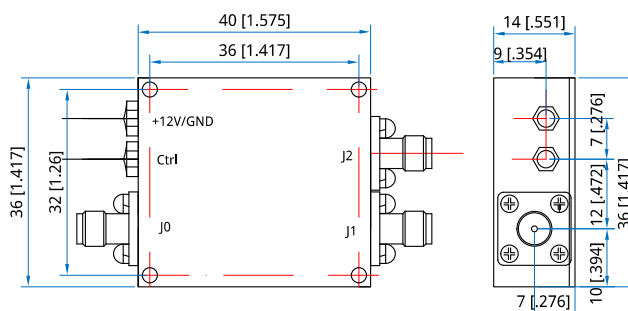
Size ^{*1} :	40*36*14mm 1.575*1.417*0.551in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.8mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-30~+70°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J2 On, J0 - J1 Off

How To Order

NPS2-1000-26500-R

Customization is available upon request.

NPS2-100-4000-A

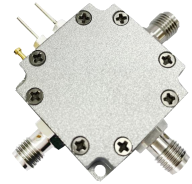
SPDT, 0.1~4GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar



Electrical

Frequency:	0.1~4GHz
On/Off Delay:	100nS max.
Supply Voltage:	+5±0.5V
Current:	50mA typ.
Control:	TTL High - 1
	TTL Low/NC - 0

Frequency range (GHz)	Insertion Loss (dB)	Isolation (dB)	VSWR (On state)
0.1~1	1.4	40	1.8
1~3.5	1.4	40	1.2
3.5~4	1.8	35	1.2

Absolute Maximum Ratings

RF Input Power:	+26dBm
Control Voltage Range:	-0.5~+7V DC
Hot Switch Power:	+18dBm

Mechanical

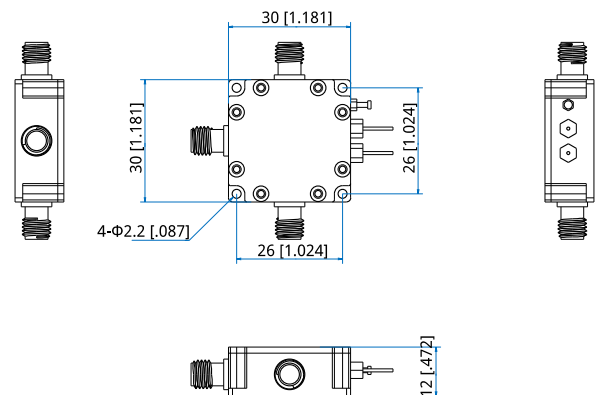
Size*1:	30*30*12mm 1.181*1.181*0.472in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-65~+150°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

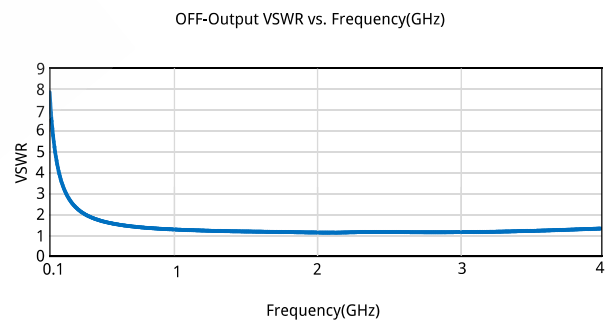
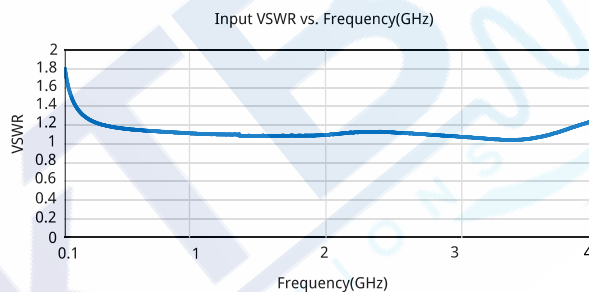
Control	Connection
0	J0 - J2 On
1	J0 - J1 On

How To Order

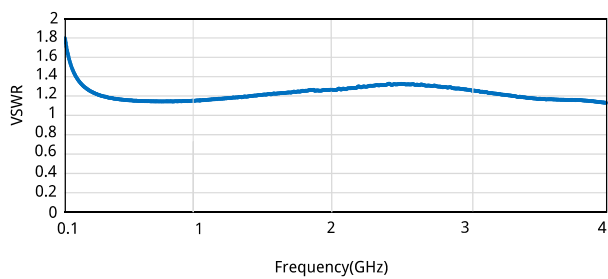
NPS2-100-4000-A

Customization is available upon request.

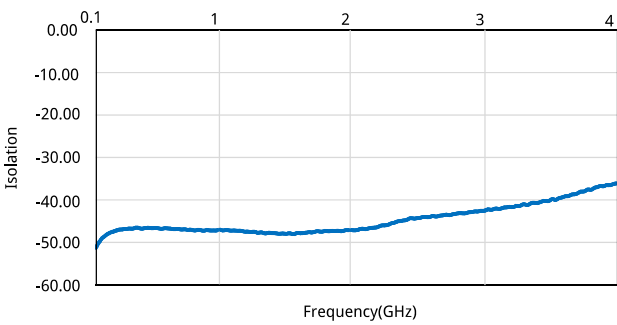
Typical Performance Curves



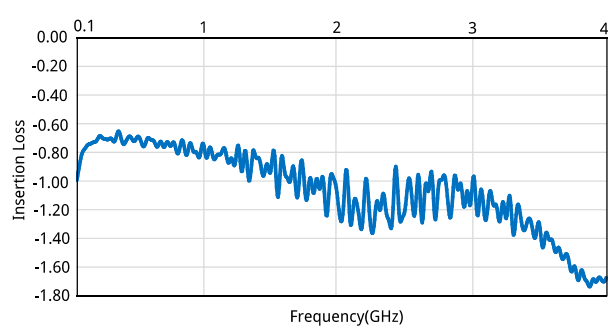
ON-Output VSWR vs. Frequency(GHz)



Isolation vs. Frequency(GHz)



Insertion Loss vs. Frequency(GHz)



NPS2-14-1000-A

SP2T, 0.014~1GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.014~1GHz
Insertion Loss:	1.5dB max.
Isolation:	65dB min.
VSWR:	1.6 max.
Input Power:	37dBm max.
On/Off Delay:	3.5uS max.
Impedance:	50Ω
Voltage:	+12V DC
Current:	150mA

Mechanical

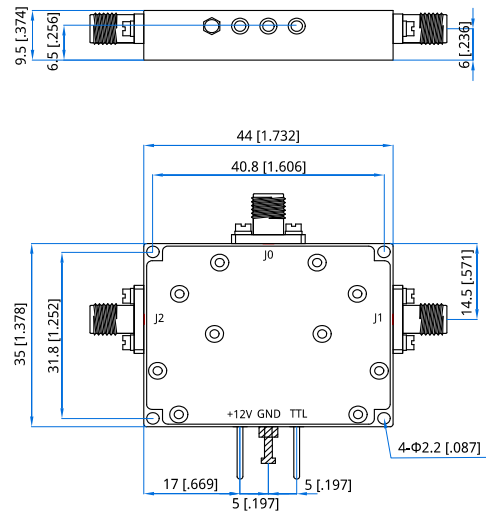
Size*1:	44*35*9.5mm 1.732*1.378*0.374in
Weight:	40g
Material:	Aluminum
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J2 On, J0 - J1 Off

How To Order

NPS2-14-1000-A

Customization is available upon request.

NPS2-1980-2010-R

SPDT, 1.98~2.01GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	1.98~2.01GHz
Insertion Loss:	0.6dB max.
Isolation:	30dB min.
VSWR:	1.5 max.
Average Power:	100W
Impedance:	50Ω
Voltage/Current:	+5V/500mA max.
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

Size*1:	40*35*20mm 1.575*1.378*0.787in
RF Connectors:	SMA Female
Power Supply & Control Connectors:	Feed Through/Terminal Post

[1] Exclude connectors.

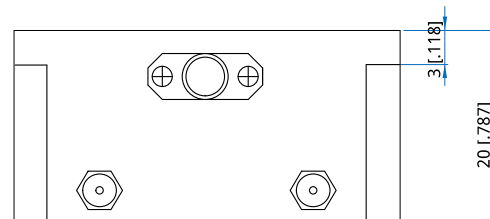
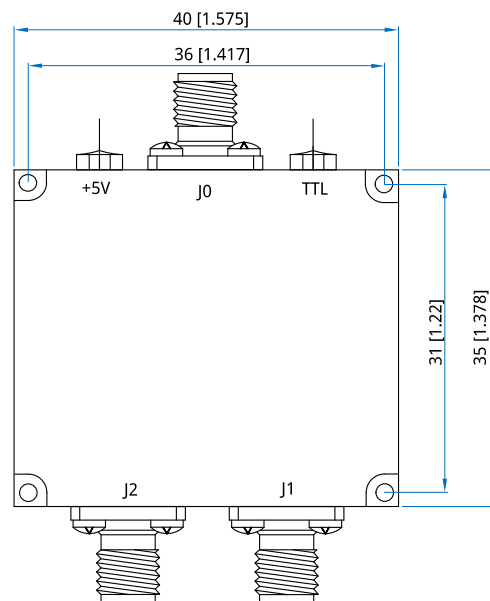
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Control True Table

Ctrl	Connection
0	J0 - J2 On, J0 - J1 Off
1	J0 - J1 On, J0 - J2 Off

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS2-1980-2010-R

Customization is available upon request.

NPS2-20-530-R

SP2T, 0.02~0.53GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.02~0.53GHz
Insertion Loss (J2):	0.65dB max.
Insertion Loss (J1):	0.55dB max.
Isolation (J2):	50dB min.
Isolation (J1):	25dB min.
Input VSWR:	1.4 max.
Output VSWR:	1.4 max.
Switch Time	12ms max.
(50%TTL~90/10%RF):	
Average Power (Cold Switch):	100W max.
Peak Power	500W max.
(Cold Switch, 1us Pulse):	
Impedance:	50Ω
Voltage:	+28V DC
Current:	200mA max.
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

Size*1:	53.98*57.15*24.64mm
	2.125*2.25*0.97in
RF Connectors:	SMA Female
Mounting:	4-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+70°C
Non-operating Temperature:	-55~+85°C

Control True Table

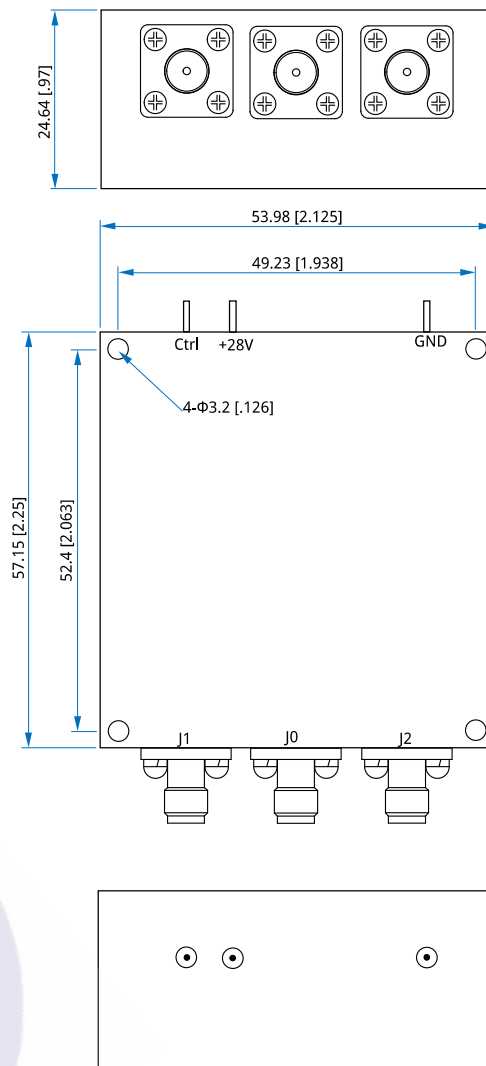
Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J2 On, J0 - J1 Off

How To Order

NPS2-20-530-R

Customization is available upon request.

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

NPS2-2400-2500-R

SPDT, 2.4~2.5GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	2.4~2.5GHz
Insertion Loss:	2dB max.
Isolation:	40dB min.
VSWR:	1.8 max.
Input Power:	30dBm max.
Voltage:	-5V, +5V DC
Current:	50mA max.
On/Off Delay:	200nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

Size*1:	30*20*12mm 1.181*0.787*0.472in
Weight:	80g typ.
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	2*Φ2.2mm through-hole

[1] Exclude connectors.

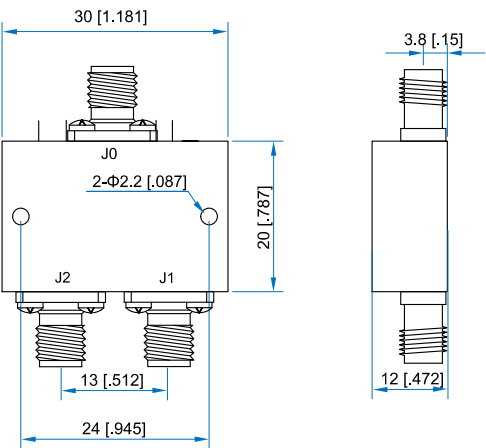
Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Pin Numbering

Pin	Function	Pin	Function
+5V	+5V	C1	Control J1
-5V	-5V	C2	Control J2
G	GND		

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	Connection
0	0	Open
1	0	J0 - J1 On
0	1	J0 - J2 On
1	1	Open

How To Order

NPS2-2400-2500-R

Customization is available upon request.

NPS2-26000-40000-A SPDT, 26~40GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	26~40GHz
Insertion Loss:	5dB max.
Isolation:	30dB min.
VSWR:	2.2 max.
Input Power:	0.2W max.
Voltage:	-5V, +5V DC
Current:	10mA, 70mA
On/Off Delay:	500nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

Size*1:	26*16*12mm 1.024*0.63*0.472in
RF Connectors:	2.92mm Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum, gold plated
Mounting:	2-Φ2.2mm through-hole

[1] Exclude connectors.

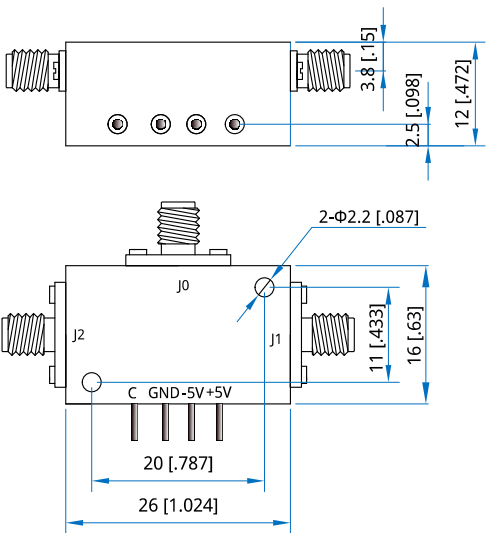
Environmental

Operating Temperature: -30~+70°C

Pin Numbering

Pin	Function	Pin	Function
+5V	+5V	C	Control
-5V	-5V	GND	GND

Outline Drawings



Unit: mm [in]
 Tolerance: ±0.2mm [±0.008in]

Control True Table

C	Connection
0	J0 - j1 On
1	J0 - J2 On

How To Order **NPS2-26000-40000-A**

Customization is available upon request.

NPS2-2700-3100-A

SPDT, 2.7~3.1GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	2.7~3.1GHz
Insertion Loss:	1.3dB max.
Isolation:	75dB min.
VSWR:	1.3 max.
Power:	30dBm max.
On/Off Delay:	100nS max.
Supply Voltage:	+5±0.5V -15±3V
Current:	0.05A max
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

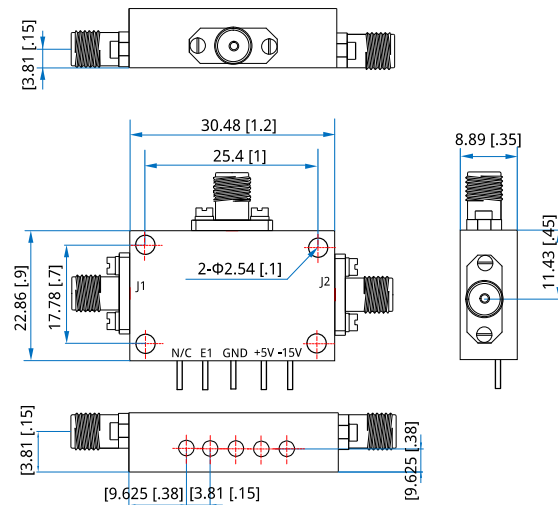
Size* ¹ :	30.48*22.86*8.89mm 1.2*0.9*0.35in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.55mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-50~+85°C
Non-operating Temperature:	-65~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C	Connection
0	Off
1	On

How To Order

NPS2-2700-3100-A

Customization is available upon request.

NPS2-3000-6000-R

SPDT, 3~6GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	3~6GHz
Insertion Loss:	2.2dB max.
Isolation:	30dB min.
VSWR:	2 max.
Input Power:	0.5W max.
Voltage:	-5V, +5V DC
Current:	50mA, 50mA typ.
On/Off Delay:	200nS max.
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

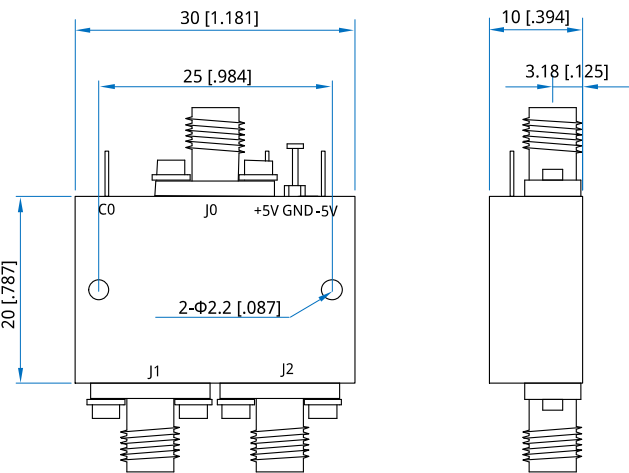
Size ^{*1} :	30*20*10mm 1.181*0.787*0.394in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	2-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J2 On, J0 - J1 Off
1	J0 - J1 On, J0 - J2 Off

How To Order

NPS2-3000-6000-R

Customization is available upon request.

NPS2-30-500-R

SP2T, 0.03~0.5GHz, Reflective

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	0.03~0.5GHz
Insertion Loss:	0.3dB typ.
Isolation:	55dB min.
Input VSWR:	1.5 max.
Output VSWR:	1.5 max.
Switc Time:	1us max.
Average Power:	50W max.
Impedance:	50Ω
Voltage:	+12V DC
Current:	300mA max.
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

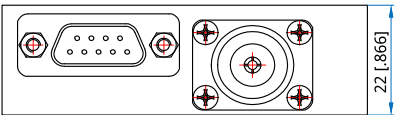
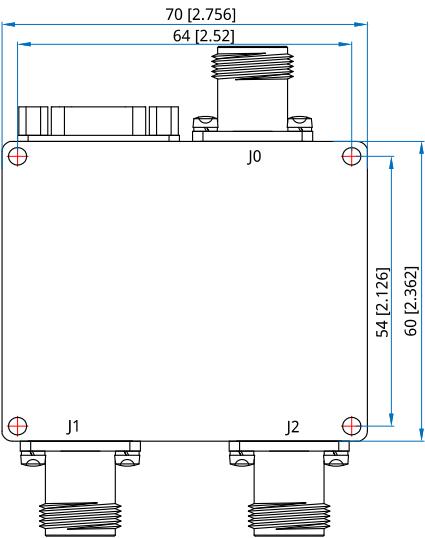
Size*1:	70*60*22mm
	2.756*2.362*0.866in
RF Connectors:	SMA female
Control Interface:	DB9-female

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J2 On, J0 - J1 Off

How To Order

NPS2-30-500-R

Customization is available upon request.

NPS2-500-2500-R

SP2T, 0.5~2.5GHz, Reflective

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	0.5~2.5GHz
Insertion Loss:	1dB max.
Isolation:	45dB min.
Input VSWR:	1.5 max.
Output VSWR:	1.5 max.
Switich Time	12ms max.
(50%TTL~90/10%RF):	
Average Power:	15W max.
Impedance:	50Ω
Voltage:	+5/+28V DC
Current:	200mA max. @+28V
Current:	70mA max. @+5V
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

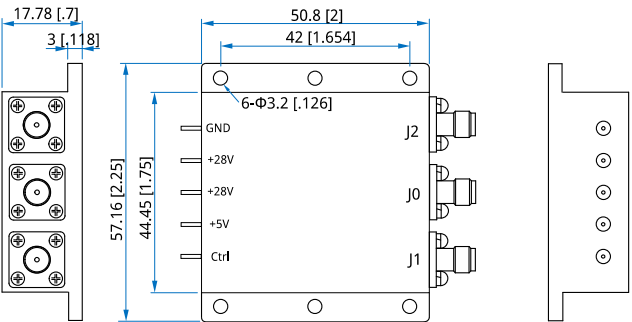
Size*1:	50.8*57.16*17.78mm
	2*2.25*0.7in
RF Connectors:	SMA Female
Mounting:	6-Φ3.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+80°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J2 On, J0 - J1 Off

How To Order

NPS2-500-2500-R

Customization is available upon request.

NPS2-6000-18000-A

SPDT, 6~18GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	6~18GHz
Insertion Loss:	3.2dB max.
Isolation:	60dB min.
VSWR:	2.2 max.
Voltage:	-5V, +5V DC
Current:	50mA, 50mA typ.
Power:	23dBm max.
On/Off Delay:	50nS max.
Control:	TTL High - 1 TTL Low/NC - 0
Impedance:	50Ω

Mechanical

Size ^{*1} :	30*20*12mm 1.181*0.787*0.472in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	2-Φ2.2mm through-hole

[1] Exclude connectors.

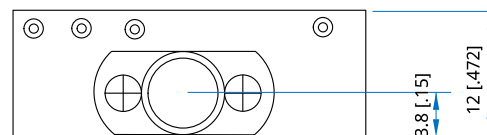
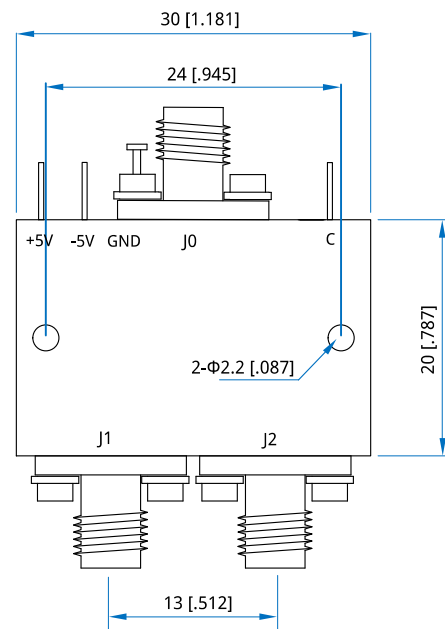
Environmental

Operating Temperature:	-40~+70°C
------------------------	-----------

Control True Table

Ctrl	Connection
0	J0 - J1 On
1	J0 - J2 On

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS2-6000-18000-A

Customization is available upon request.

NPS2-8000-11000-A

SPDT, 8~11GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	8~11GHz
Insertion Loss:	2dB max.
Isolation:	60dB min.
VSWR:	1.8 max.
Average Power:	30dBm max.
Voltage:	+28V DC
Current:	80mA max.
On/Off Delay:	200nS max.
Impedance:	50Ω
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

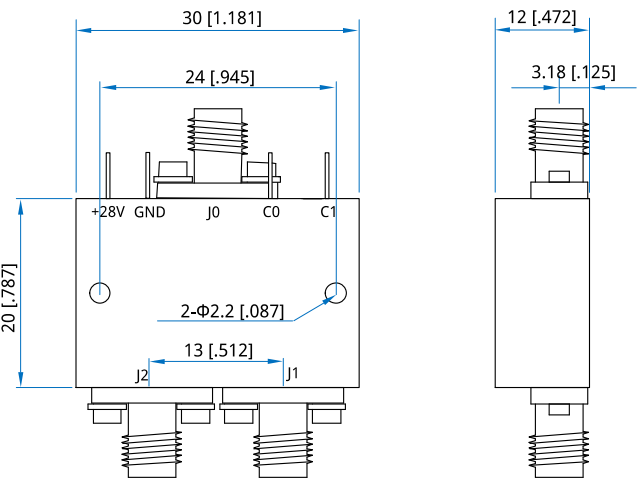
Size*1:	30*20*12mm 1.181*0.787*0.472in
RF Connectors:	SMA Female
Power Supply & Control Interface:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	2-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+70°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

Ctrl	Connection
0	J0 - J1 On, J0 - J2 Off
1	J0 - J1 On, J0 - J2 Off

How To Order

NPS2-8000-11000-A

Customization is available upon request.

NPS3

SP3T

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Specifications

Part Number	Frequency (GHz)	IL (dB Max.)	VSWR (Max.)	Isolation (dB Min.)	Power (W Max.)	On/Off Delay (nS Max.)
NPS3-20-1000	0.02~1	1.3	1.4	70	1	50
NPS3-1000-2000	1~2	1.6	1.4	70	1	50
NPS3-2000-6000	2~6	2	1.6	70	1	50
NPS3-8000-12000	8~12	2.2	1.6	70	1	50
NPS3-6000-18000	6~18	2.5	1.8	60	1	50
NPS3-18000-26500	18~26.5	2.7	2	60	1	50
NPS3-26500-40000	26.5~40	3.5	2	60	1	50

Mechanical

Size*1: 40*26*12mm
1.575*1.024*0.472in
RF Connectors: SMA Female
Power Supply Connectors: Feed Through/Terminal Post
Housing Material: Aluminum
Mounting: 4-Φ2.7mm through-hole

[1] Exclude connectors.

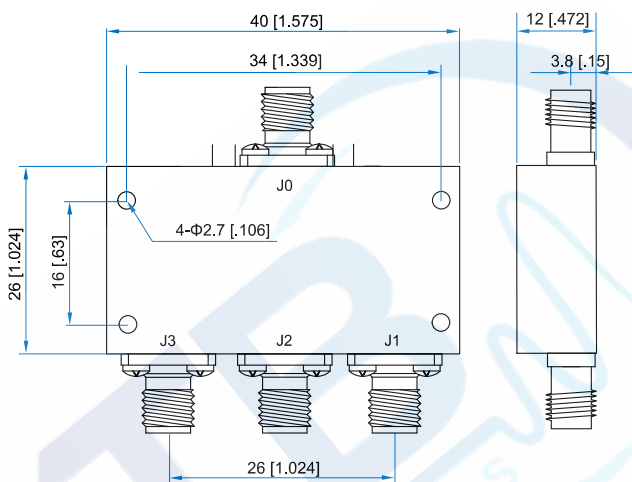
Electrical

Frequency: 0.02~40GHz
Control: TTL High - 1
TTL Low/NC - 0

Environmental

Operating Temperature: -40~+70°C
Non-operating Temperature: -55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	Connection
0	0	J0 - J1 On
0	1	J0 - J2 On
1	0	J0 - J3 On

How To Order

NPS3-X-Y-Z

X: Start frequency in MHz

Y: Stop frequency in MHz

Z: Absorptive: A, Reflective: R.

Examples:

To order an SP3T PIN Diode Switch, 6~18GHz, reflective, specify NPS3-6000-18000-R.

Customization is available upon request.

NPS3-1800-2200-R

SP3T, 1.8~2.2GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	1.8~2.2GHz
Insertion Loss:	1.3dB max.
Isolation:	60dB typ.
VSWR:	1.8 max.
Power:	48dBm max.
Voltage:	+5V, +28V DC
Current:	100, 300mA
On/Off Delay:	200nS max.
Control:	TTL High - 1 TTL Low/NC - 0
Impedance:	50Ω

Mechanical

Size*1:	52*38*14mm 2.047*1.496*0.551in
Weight:	200g max.
Material:	Aluminum
RF Connectors:	SMA Female, removable Φ3.8mm inner pin
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

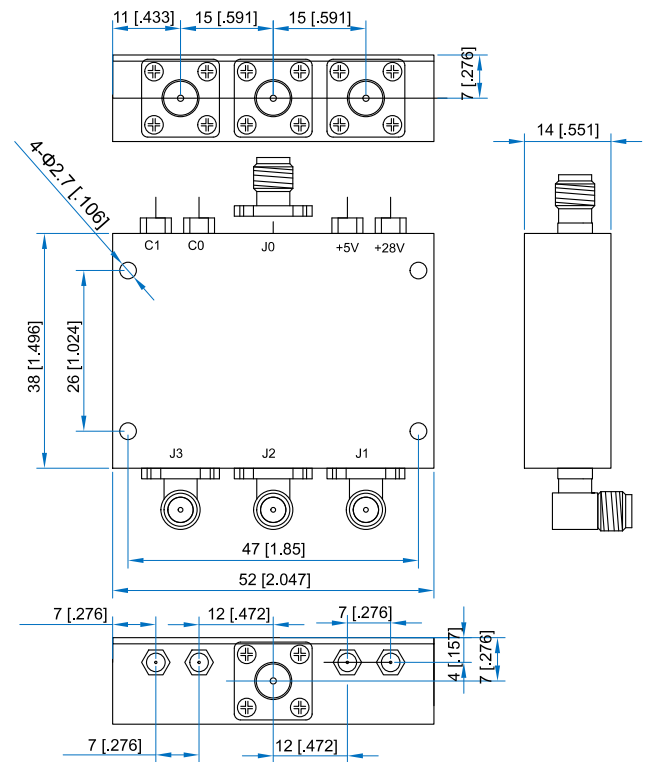
Environmental

Operating Temperature:	-30~+70°C
Non-operating Temperature:	-40~+85°C

Control True Table

C1	C2	Connection
0	0	J0 - J1 On
0	1	J0 - J2 On
1	0	J0 - J3 On
1	1	Off

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS3-1800-2200-R

Customization is available upon request.

NPS3-20-18000-A

SP3T, 0.02~18GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	0.02~18GHz
Insertion Loss:	5dB max.
Isolation:	60dB min.
VSWR:	2 max.
Input Power:	1W max.
Voltage:	+5V, -5V DC
Current:	120mA, 50mA.
On/Off Delay:	250nS
Control:	TTL High - 1
	TTL Low/NC - 0
Impedance:	50Ω

Mechanical

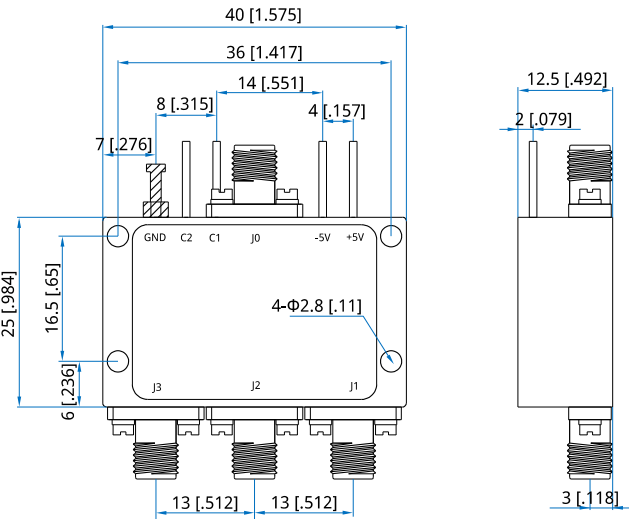
Size*1:	40*25*12.5mm 1.575*0.984*0.492in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.8mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	Connection
0	0	J0 - J1 On
0	1	J0 - J2 On
1	0	J0 - J3 On
1	1	Off

How To Order

NPS3-20-18000-A

Customization is available upon request.

NPS4

SP4T

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Specifications

Part Number	Frequency (GHz)	IL (dB Max.)	VSWR (Max.)	Isolation (dB Min.)	Power (W Max.)	On/Off Delay (nS Max.)
NPS4-20-1000	0.02~1	1.5	1.5	70	1	50
NPS4-1000-2000	1~2	1.6	1.5	70	1	50
NPS4-2000-6000	2~6	2.4	1.8	70	1	50
NPS4-8000-12000	8~12	2.5	1.8	70	1	50
NPS4-6000-18000	6~18	2.8	2	60	1	50
NPS4-18000-26500	18~26.5	3	2.2	60	1	50
NPS4-26500-40000	26.5~40	4	2.2	60	1	50

Mechanical

Size*1: 52*26*12mm
2.047*1.024*0.472in
RF Connectors: SMA Female
Power Supply Connectors: Feed Through/Terminal Post
Housing Material: Aluminum
Mounting: 4-Φ2.7mm through-hole

[1] Exclude connectors.

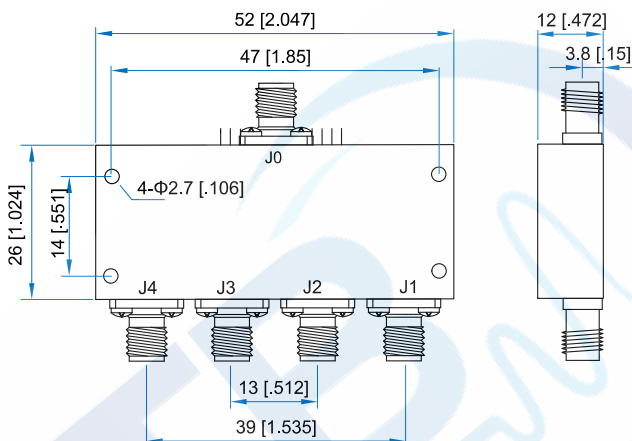
Electrical

Frequency: 0.02~40GHz
Control: TTL High - 1
TTL Low/NC - 0

Environmental

Operating Temperature: -40~+70°C
Non-operating Temperature: -55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	Connection
0	0	J0 - J1 On
0	1	J0 - J2 On
1	0	J0 - J3 On
1	1	J0 - J4 On

How To Order

NPS4-X-Y-Z

X: Start frequency in MHz
Y: Stop frequency in MHz
Z: Absorptive: A, Reflective: R.

Examples:

To order an SP4T PIN Diode Switch, 6~18GHz, reflective, specify NPS4-6000-18000-R.

Customization is available upon request.

NPS4-1000-18000-A

SP4T, 1~18GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~18GHz
Insertion Loss:	6dB max. @25°C
Isolation:	60dB min.@25°C
VSWR:	2.5 max.
Output Phase Equalization:	50° max.@25°C
IP3:	45dBm min.
Switching Time:	200ns max.
Voltage/Current:	±5V/1A max.
Impedance:	50Ω
Input Power:	1W max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

Size*1:	47.65*50*16mm 1.876*1.969*0.63in
RF Connectors:	SMA Female
Power Supply & Control Connectors:	Feed Through
Mounting:	5-Φ2.8mm through-hole

[1] Exclude connectors.

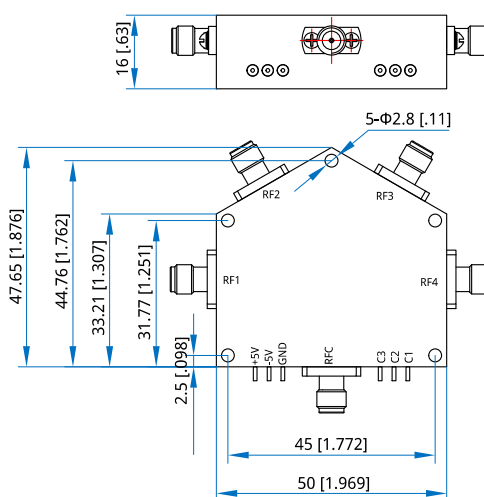
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Control True Table

C1	C2	C3	Connection
0	0	0	RFC - RF1 On
0	0	1	RFC - RF2 On
0	1	0	RFC - RF3 On
0	1	1	RFC - RF4 On

Outline Drawings



Unit: mm [in]

Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

How To Order

NPS4-1000-18000-A

Customization is available upon request.

NPS4-3000-6000-R

SP4T, 3~6GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	3~6GHz
Insertion Loss:	3.2dB max.
Isolation:	30dB min.
VSWR:	2 max.
Input Power:	0.5W max.
Voltage:	-5V, +5V DC
Current:	100mA, 100mA typ.
On/Off Delay:	200nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

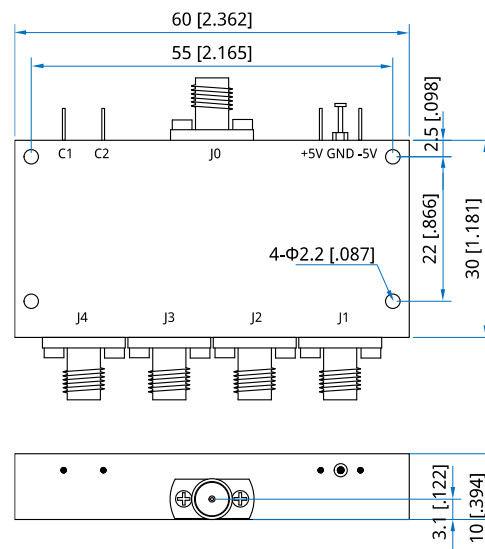
Size ^{*1} :	60*30*10mm 2.362*1.181*0.394in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	Connection
0	0	J0 - J1 On
0	1	J0 - J2 On
1	0	J0 - J3 On
1	1	J0 - J4 On

How To Order

NPS4-3000-6000-R

Customization is available upon request.

NPS4-400-8000-A

SP4T, 0.4~8GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.4~8GHz
Insertion Loss:	2dB max. @25°C
Isolation:	60dB min.@25°C
VSWR:	1.7 max.
Average Power:	30dBm max.
Switching Time:	100ns max.
Voltage/Current:	+5V DC/200mA typ.
	-5V DC/50mA typ.
Impedance:	50Ω

Mechanical

Size ^{*1} :	52*20*10.2mm
	2.047*0.787*0.402in
RF Connectors:	SMA Female
Power Supply & Control Connectors:	Feed Through
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

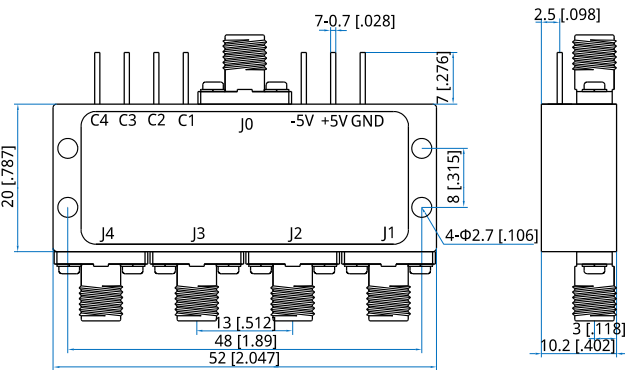
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Control True Table

C4	C3	C2	C1	Connection
1	1	1	0	J0 - J1 On
1	1	0	1	J0 - J2 On
1	0	1	1	J0 - J3 On
0	1	1	1	J0 - J4 On

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS4-400-8000-A

Customization is available upon request.

NPS4-500-40000-A

SP4T, 0.5~40GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~40GHz
Insertion Loss:	8dB max.
Isolation:	70dB min.
Amplitude Balance:	0.3dB max.
IP3:	40dBm min.
On/Off Delay:	100uS max.
VSWR:	2 max.
Power Supply:	88~264V AC/47Hz~63Hz
Impedance:	50Ω

Mechanical

Size*1:	120*60*30mm 4.724*2.362*1.181in
RF Connectors:	2.92mm Female
Control Interface:	DE-9S
Power Supply Interface:	Standard IEC

[1] Exclude connectors.

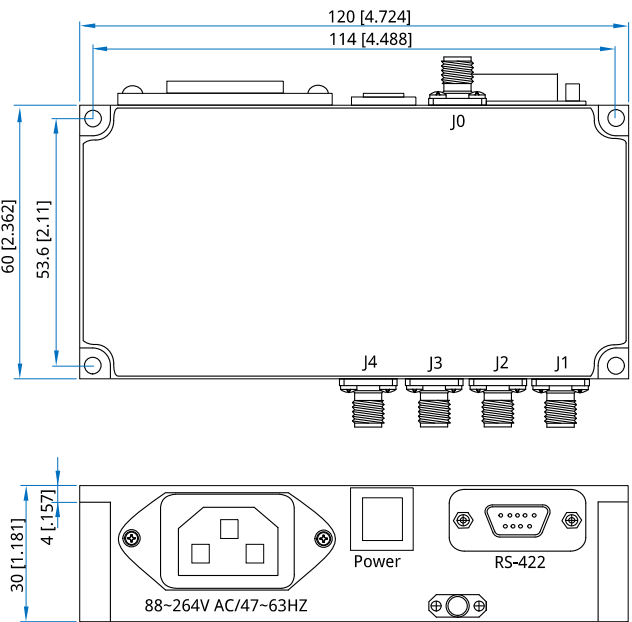
Environmental

Operating Temperature:	-30~+70°C
Non-operating Temperature:	-40~+85°C

Pin Numbering

Pin	Function	Pin	Function
1	Tx+	4	Rx-
2	Tx-	5	DGND
3	Rx+	6~9	NC

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS4-500-40000-A

Customization is available upon request.

NPS4-8000-40000-A

SP4T, 8~40GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	8~40GHz
Insertion Loss:	6.5dB max.
Isolation:	60dB min.
On/Off Delay:	50nS max.
VSWR:	3 max.
Impedance:	50Ω
Input Power:	23 dBm max.

Mechanical

Size*1:	31.18*27*12mm 1.228*1.063*0.472in
RF Connectors:	2.92mm Female
Weight:	23g
Material:	Aluminum
Outer Conductor:	Gold Plating or Nickel plated
Mounting:	3-Φ2.2mm through-hole

[1] Exclude connectors.

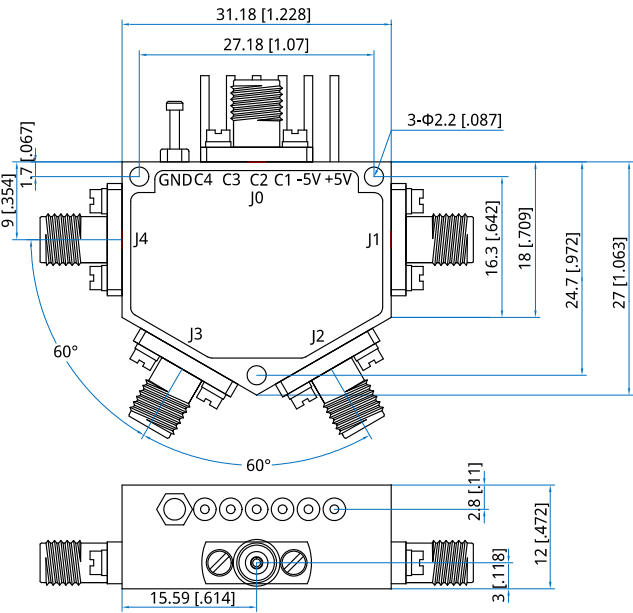
Environmental

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

Pin Numbering

C1	C2	C3	C4	Connection
0	1	1	1	J0-J1
1	0	1	1	J0-J2
1	1	0	1	J0-J3
1	1	1	0	J0-J4

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NPS4-8000-40000-A

Customization is available upon request.

NPS4-8000-40000-R

SP4T, 8~40GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	8~40GHz
Insertion Loss:	5.5dB max.
Isolation:	60dB min.
IP3:	23dBm min.
On/Off Delay:	100nS max.
VSWR:	2.5 max.
Impedance:	50Ω
Input Power:	23 dBm max.

Mechanical

Size ^{*1} :	31.18*27*12mm 1.228*1.063*0.472in
RF Connectors:	2.92mm Female
Weight:	38g
Material:	Aluminum
Outer Conductor:	Nickel plated
Mounting:	3-Φ2.2mm through-hole

[1] Exclude connectors.

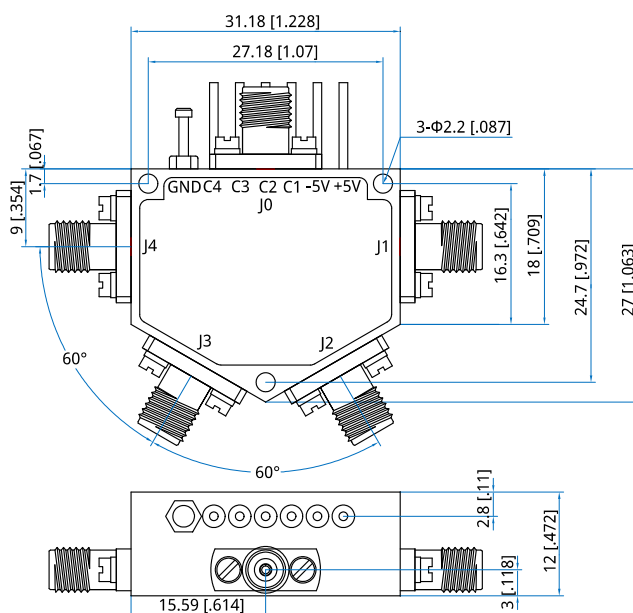
Environmental

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

Pin Numbering

C1	C2	C3	C4	Connection
0	1	1	1	J0-J1
1	0	1	1	J0-J2
1	1	0	1	J0-J3
1	1	1	0	J0-J4

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS4-8000-40000-R

Customization is available upon request.

NPS5

SP5T

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Specifications

Part Number	Frequency (GHz)	IL (dB Max.)	VSWR (Max.)	Isolation (dB Min.)	Power (W Max.)	On/Off Delay (nS Max.)
NPS5-20-1000	0.02~1	1.7	1.5	70	1	50
NPS5-1000-2000	1~2	1.8	1.5	70	1	50
NPS5-2000-6000	2~6	2.8	1.8	70	1	50
NPS5-8000-12000	8~12	2.8	1.8	70	1	50
NPS5-6000-18000	6~18	2.8	2	60	1	50
NPS5-18000-26500	18~26.5	3.2	2.2	60	1	50
NPS5-26500-40000	26.5~40	4.2	2.2	60	1	50

Mechanical

Size*1: 65*32*12mm
2.559*1.26*0.472in
RF Connectors: SMA Female
Power Supply Connectors: Feed Through/Terminal Post
Housing Material: Aluminum
Mounting: 4-Φ2.7mm through-hole

[1] Exclude connectors.

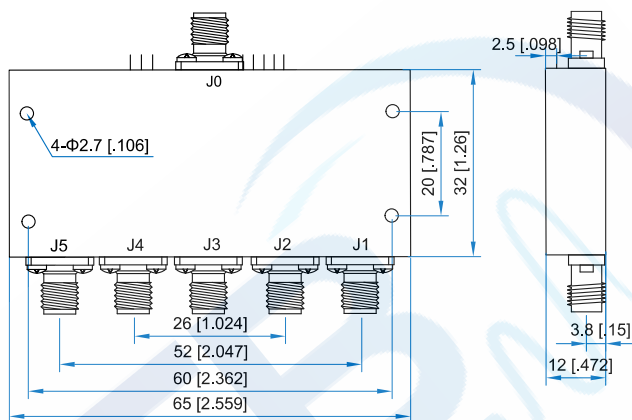
Electrical

Frequency: 0.02~40GHz
Control: TTL High - 1
TTL Low/NC - 0

Environmental

Operating Temperature: -40~+70°C
Non-operating Temperature: -55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	C3	Connection
0	0	0	J0 - J1 On
0	0	1	J0 - J2 On
0	1	0	J0 - J3 On
0	1	1	J0 - J4 On
1	0	0	J0 - J5 On

How To Order

NPS5-X-Y-Z

X: Start frequency in MHz
Y: Stop frequency in MHz
Z: Absorptive: A, Reflective: R.

Examples:

To order an SP5T PIN Diode Switch, 6~18GHz, reflective, specify NPS5-6000-18000-R.

Customization is available upon request.

NPS5-1000-6000-R

SP5T, 1~6GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	1~6GHz
Insertion Loss:	2.8dB max.
Isolation:	30dB typ.
VSWR:	1.8 max.
Input Power:	20W max.
Voltage:	+5V, +28V
Current:	100mA, 200mA
On/Off Delay:	300nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

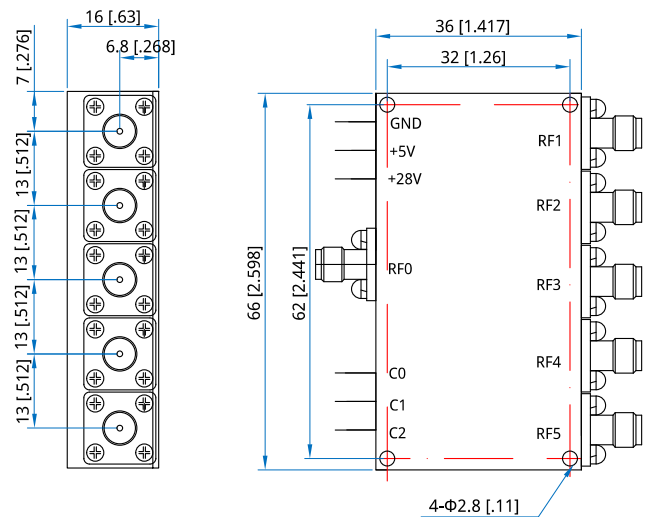
Size*1:	66*36*16mm 2.598*1.417*0.630in
RF Connectors:	SMA Female
Weight:	500g max.
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.8mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-30~+70°C
Non-operating Temperature:	-40~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C0	C1	C2	Connection
0	0	0	RF0 to RF1
0	0	1	RF0 to RF2
0	1	0	RF0 to RF3
0	1	1	RF0 to RF4
1	0	0	RF0 to RF5

How To Order

NPS5-1000-6000-R

Customization is available upon request.

NPS5-100-18000-A

SP5T, 0.1~18GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.1~18GHz
Insertion Loss:	3.5dB max.
Isolation:	60dB min.
On/Off Delay:	120nS max.
VSWR:	2.0 max.
Voltage/Current:	+5V DC/250mA max.
	-5V DC/50mA max.
Impedance:	50Ω
Input Power:	30dBm max.

Mechanical

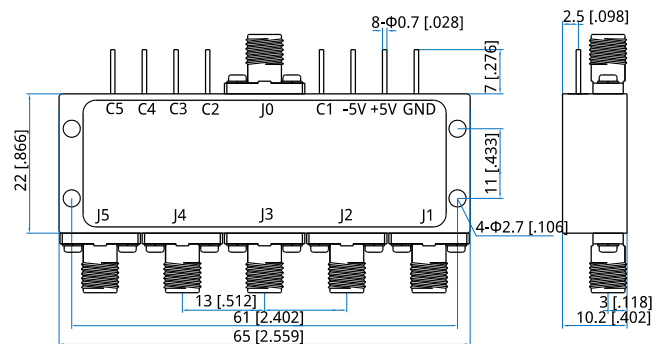
Size*1:	65*22*10.2mm
	2.559*0.866*0.402in
RF Connectors:	SMA Female
Weight:	45g
Housing Material:	Aluminum
Outer Conductor:	Nickel plated
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Pin Numbering

C1	C2	C3	C4	C5	Connection
0	1	1	1	1	J0-J1
1	0	1	1	1	J0-J2
1	1	0	1	1	J0-J3
1	1	1	0	1	J0-J4
1	1	1	1	0	J0-J5

How To Order

NPS5-100-18000-A

Customization is available upon request.

NPS5-3000-6000-R

SP5T, 3~6GHz, Reflective

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	3~6GHz
Insertion Loss:	3.6dB max.
Isolation:	30dB min.
VSWR:	2.2 max.
Input Power:	0.5W max.
Voltage:	-5V, +5V DC
Current:	130mA, 130mA typ.
On/Off Delay:	200nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

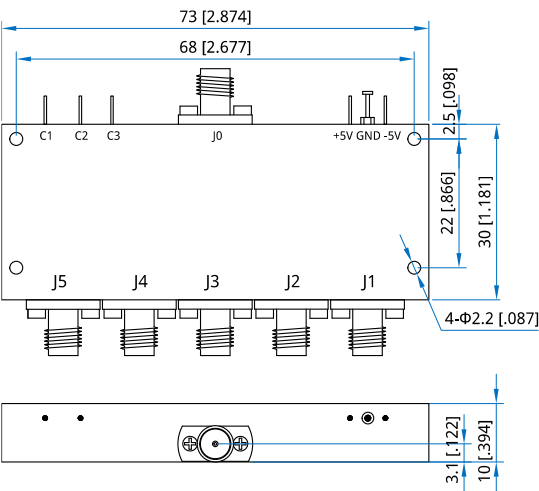
Size*1:	73*30*10mm 2.874*1.181*0.394in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	C3	Connection
0	0	0	Off
0	0	1	J0 - J1 On
0	1	0	J0 - J2 On
0	1	1	J0 - J3 On
1	0	0	J0 - J4 On
1	0	1	J0 - J5 On
1	1	0	Off
1	1	1	Off

How To Order

NPS5-3000-6000-R

Customization is available upon request.

NPS6

SP6T

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Specifications

Part Number	Frequency (GHz)	IL (dB Max.)	VSWR (Max.)	Isolation (dB Min.)	Power (W Max.)	On/Off Delay (nS Max.)
NPS6-20-1000	0.02~1	1.8	1.5	70	1	50
NPS6-1000-2000	1~2	2	1.5	70	1	50
NPS6-2000-6000	2~6	3	1.8	70	1	50
NPS6-8000-12000	8~12	3	1.8	70	1	50
NPS6-6000-18000	6~18	3	2	60	1	50
NPS6-18000-26500	18~26.5	3.5	2.2	60	1	50
NPS6-26500-40000	26.5~40	4.5	2.2	60	1	50

Mechanical

Size*1: 78*38*12mm
3.071*1.496*0.472in

RF Connectors: SMA Female

Power Supply Connectors: Feed Through/Terminal Post

Housing Material: Aluminum

Mounting: 4-Φ2.7mm through-hole

[1] Exclude connectors.

Electrical

Frequency: 0.02~40GHz

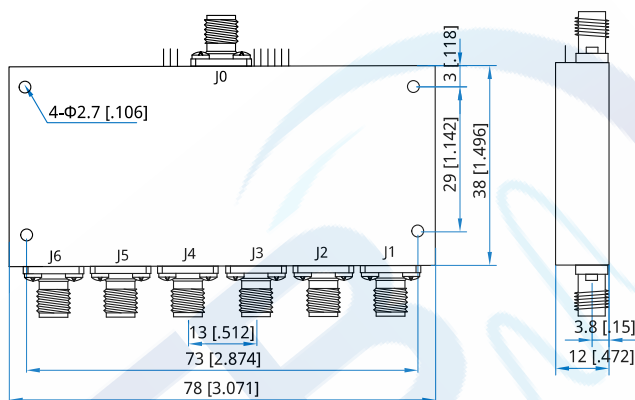
Control: TTL High - 1
TTL Low/NC - 0

Environmental

Operating Temperature: -40~+70°C

Non-operating Temperature: -55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	C3	Connection
0	0	0	J0 - J1 On
0	0	1	J0 - J2 On
0	1	0	J0 - J3 On
0	1	1	J0 - J4 On
1	0	0	J0 - J5 On
1	0	1	J0 - J6 On

How To Order

NPS6-X-Y-Z

X: Start frequency in MHz

Y: Stop frequency in MHz

Z: Absorptive: A, Reflective: R.

Examples:

To order an SP6T PIN Diode Switch, 6~18GHz, reflective, specify NPS6-6000-18000-R.

Customization is available upon request.

NPS6-1000-18000-A

SP6T, 1~18GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	1~18GHz
Insertion Loss:	4.5dB max.
Isolation:	50dB min.
VSWR:	2 max.
Average Power:	24dBm max.
Switching Time:	100ns max.
Voltage/Current:	5V/50mA max.
Impedance:	50Ω
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

Size ^{*1} :	30*86*20mm 1.181*3.386*0.787in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Mounting:	4-Φ2.2mm through-hole

[1] Exclude connectors.

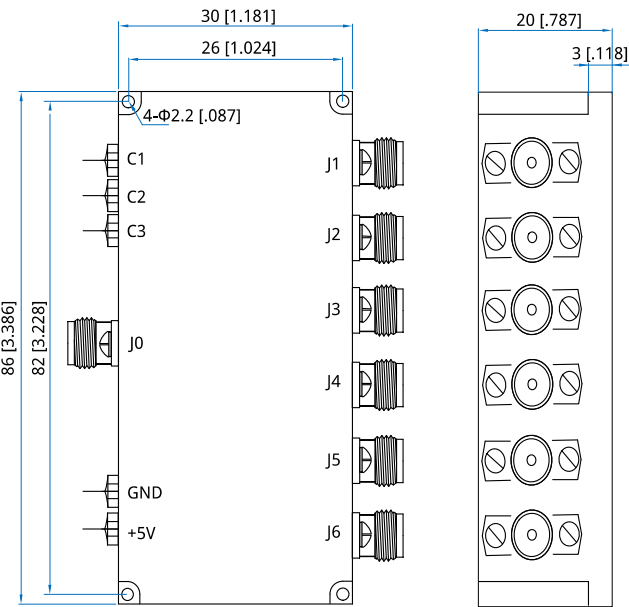
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Control True Table

C1	C2	C3	Connection
0	0	0	J0 - J1 On
0	1	0	J0 - J2 On
0	0	1	J0 - J3 On
0	1	1	J0 - J4 On
1	0	0	J0 - J5 On
1	1	0	J0 - J6 On

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NPS6-1000-18000-A

Customization is available upon request.

NPS6-3000-6000-R

SP6T, 3~6GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	3~6GHz
Insertion Loss:	3.8dB max.
Isolation:	25dB min.
VSWR:	2.2 max.
Input Power:	0.5W max.
Voltage:	-5V, +5V DC
Current:	150mA, 150mA typ.
On/Off Delay:	200nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

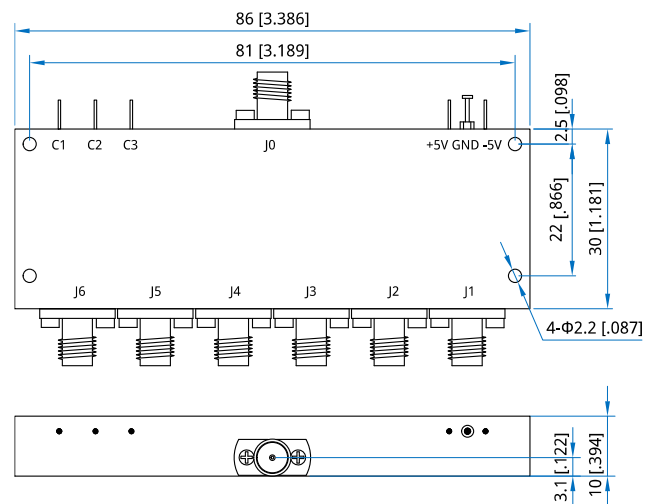
Size ^{*1} :	86*30*10mm 3.386*1.181*0.394in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	4*Φ2.2mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-20~+50°C
Non-operating Temperature:	-55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	C3	Connection
0	0	0	Off
0	0	1	J0 - J1 On
0	1	0	J0 - J2 On
0	1	1	J0 - J3 On
1	0	0	J0 - J4 On
1	0	1	J0 - J5 On
1	1	0	Off
1	1	1	J0 - J6 On

How To Order

NPS6-3000-6000-R

Customization is available upon request.

NPS8

SP8T

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Specifications

Part Number	Frequency (GHz)	IL (dB Max.)	VSWR (Max.)	Isolation (dB Min.)	Power (W Max.)	On/Off Delay (nS Max.)
NPS8-20-1000	0.02~1	2	1.5	70	1	50
NPS8-1000-2000	1~2	2.5	1.5	70	1	50
NPS8-2000-6000	2~6	3.5	1.8	70	1	50
NPS8-8000-12000	8~12	3.5	1.8	70	1	50
NPS8-6000-18000	6~18	4	2	60	1	50
NPS8-18000-26500	18~26.5	5	2.2	60	1	50
NPS8-26500-40000	26.5~40	5.5	2.5	60	1	50

Mechanical

Size*1: 86*30*16mm

3.386*1.181*0.63in

RF Connectors: SMA Female

Power Supply Connectors: Feed Through/Terminal Post

Housing Material: Aluminum

Mounting: 4-Φ2.7mm through-hole

[1] Exclude connectors.

Electrical

Frequency: 0.02~40GHz

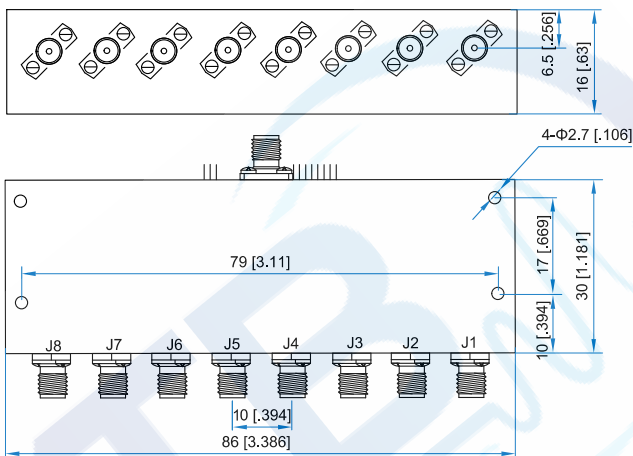
Control: TTL High - 1
TTL Low/NC - 0

Environmental

Operating Temperature: -40~+70°C

Non-operating Temperature: -55~+85°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C1	C2	C3	Connection
0	0	0	J0 - J1 On
0	0	1	J0 - J2 On
...	...	...	J0 - Jn On
1	1	1	J0 - J8 On

How To Order

NPS8-X-Y-Z

X: Start frequency in MHz

Y: Stop frequency in MHz

Z: Absorptive: A, Reflective: R.

Examples:

To order an SP8T PIN Diode Switch, 6~18GHz, reflective, specify NPS8-6000-18000-R.

Customization is available upon request.

NPS8-10000-40000-A

SP8T, 10~40GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	10~40GHz
Insertion Loss:	8.5dB max.
Isolation:	45dB min.
VSWR:	2.8 max.
Switching Time:	50ns max.
Input Power:	23dBm max.
Voltage/Current:	+5V/120mA Max.
	-5V/50mA Max.
Impedance:	50Ω
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

RF Connectors:	2.92mm Female
Weight:	45g
Mounting:	4-Φ2.3mm through-hole

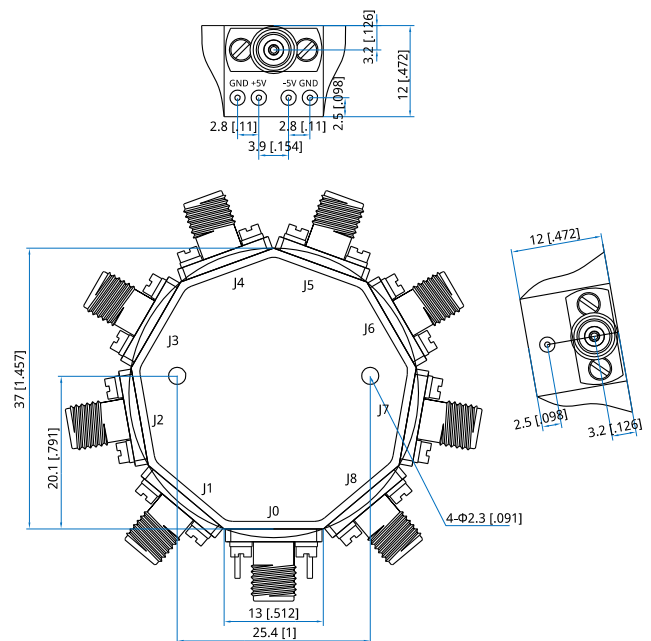
Environmental

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

Control True Table

J8	J7	J6	J5	J4	J3	J2	J1	Connection
1	1	1	1	1	1	1	0	J0 - J1
1	1	1	1	1	1	0	1	J0 - J2
1	1	1	1	1	0	1	1	J0 - J3
1	1	1	1	0	1	1	1	J0 - J4
1	1	1	0	1	1	1	1	J0 - J5
1	1	0	1	1	1	1	1	J0 - J6
1	0	1	1	1	1	1	1	J0 - J7
0	1	1	1	1	1	1	1	J0 - J8

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS8-10000-40000-A

Customization is available upon request.

NPS8-10000-40000-R

SP8T, 10~40GHz, Reflective

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	10~40GHz
Insertion Loss:	9dB max.
Isolation:	45dB min.
VSWR:	2.5 max.
Switching Time:	50ns typ.
Input Power:	23dBm max.
Voltage/Current:	+5V/120mA typ.
	-5V/50mA typ.
Impedance:	50Ω
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

RF Connectors:	2.92mm female
Weight:	45g
Mounting:	4-Φ2.3mm through-hole

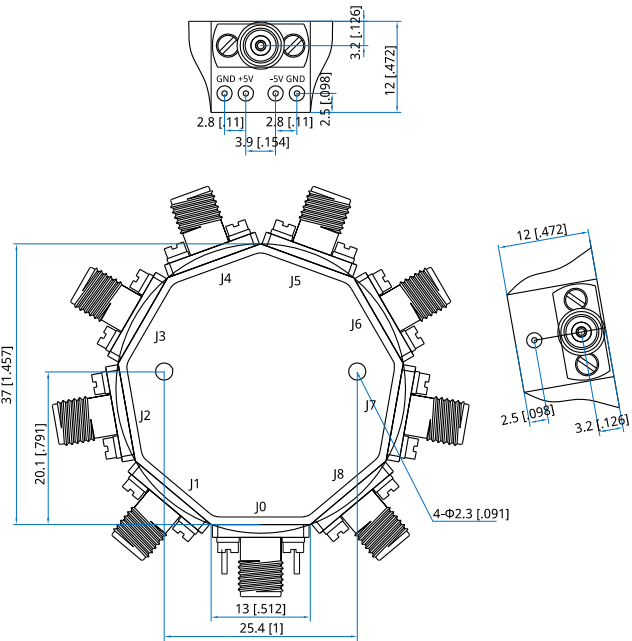
Environmental

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

Control True Table

J8	J7	J6	J5	J4	J3	J2	J1	Connection
1	1	1	1	1	1	1	0	J0 - J1
1	1	1	1	1	1	0	1	J0 - J2
1	1	1	1	1	0	1	1	J0 - J3
1	1	1	1	0	1	1	1	J0 - J4
1	1	1	0	1	1	1	1	J0 - J5
1	1	0	1	1	1	1	1	J0 - J6
1	0	1	1	1	1	1	1	J0 - J7
0	1	1	1	1	1	1	1	J0 - J8

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NPS8-10000-40000-R

Customization is available upon request.

NPS8-1000-18000-A

SP8T, 1~18GHz, Absorptive

- Features:

 - * Low Insertion Loss
 - * High Isolation
- Applications:

 - * Wireless
 - * Transmitter
 - * Laboratory Test
 - * Radar

Electrical

Frequency:	1~18GHz
Insertion Loss:	7dB max. @25°C
Isolation:	60dB min.@25°C
VSWR:	2.5 max.
Output Phase Equalization:	50° max.@25°C
IP3:	45dBm min.
Switching Time:	200ns max.
Voltage/Current:	±5V/2A max.
Impedance:	50Ω
Input Power:	1W max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

Size*1:	79.42*69.94*16mm 3.127*2.754*0.63in
RF Connectors:	SMA Female
Power Supply & Control Connectors:	Feed Through
Mounting:	4-Φ2.8mm through-hole

[1] Exclude connectors.

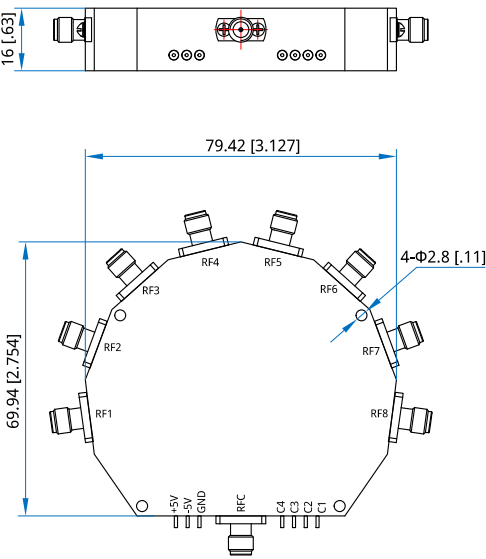
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Control True Table

C1	C2	C3	C4	Connection
0	0	0	0	RFC - RF1 On
0	0	0	1	RFC - RF2 On
0	0	1	0	RFC - RF3 On
0	0	1	1	RFC - RF4 On
0	1	0	0	RFC - RF5 On
0	1	0	1	RFC - RF6 On
0	1	1	0	RFC - RF7 On
0	1	1	1	RFC - RF8 On

Outline Drawings



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NPS8-1000-18000-A

Customization is available upon request.

NPS8-400-8000-A

SP8T, 0.4~8GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.4~8GHz
Insertion Loss:	3.2dB max.
Isolation:	70dB min.
VSWR:	1.7 max.
Average Power:	30dBm max.
Switching Time:	120ns max.
Voltage/Current:	+5V DC/400mA typ.
	-5V DC/50mA typ.
Impedance:	50Ω

Mechanical

Size ^{*1} :	104*24*10.2mm
	4.094*0.945*0.402in
RF Connectors:	SMA Female
Power Supply & Control Connectors:	Feed Through
Mounting:	4-Φ2.7mm through-hole

[1] Exclude connectors.

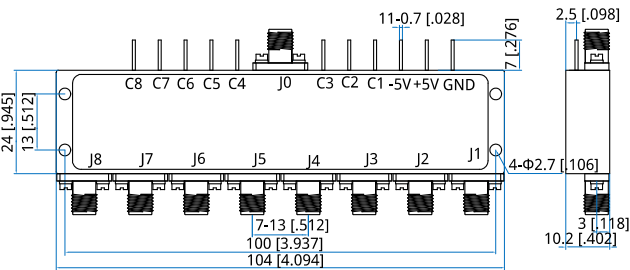
Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Control True Table

C8	C7	C6	C5	C4	C3	C2	C1	Connection
1	1	1	1	1	1	1	0	J0 - J1 On
1	1	1	1	1	1	0	1	J0 - J2 On
1	1	1	1	1	0	1	1	J0 - J3 On
1	1	1	1	0	1	1	1	J0 - J4 On
1	1	1	0	1	1	1	1	J0 - J5 On
1	1	0	1	1	1	1	1	J0 - J6 On
1	0	1	1	1	1	1	1	J0 - J7 On
0	1	1	1	1	1	1	1	J0 - J8 On

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

How To Order

NPS8-400-8000-A

Customization is available upon request.

NPS8-500-40000-A

SP8T, 0.5~40GHz, Absorptive

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	0.5~40GHz
Insertion Loss:	10dB max.
Isolation:	45dB min.
VSWR:	3 max.
Switching Time:	50ns max.
Input Power:	23dBm max.
Voltage/Current:	+5V/120mA typ.
	-5V/50mA typ.
Impedance:	50Ω
Control:	TTL High - 1
	TTL Low/NC - 0

Mechanical

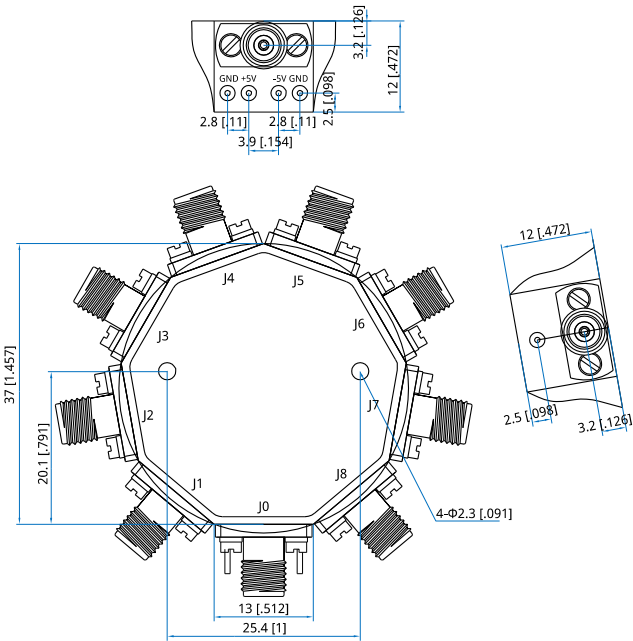
RF Connectors:	2.92mm female
Weight:	45g
Mounting:	4-Φ2.3mm through-hole

Environmental

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

Control True Table

J8	J7	J6	J5	J4	J3	J2	J1	Connection
1	1	1	1	1	1	1	0	J0 - J1
1	1	1	1	1	1	0	1	J0 - J2
1	1	1	1	1	0	1	1	J0 - J3
1	1	1	1	0	1	1	1	J0 - J4
1	1	1	0	1	1	1	1	J0 - J5
1	1	0	1	1	1	1	1	J0 - J6
1	0	1	1	1	1	1	1	J0 - J7
0	1	1	1	1	1	1	1	J0 - J8



Unit: mm [in]
Tolerance: ±0.2mm [±0.008in]

How To Order

NPS8-500-40000-A

Customization is available upon request.

Outline Drawings

NPSD-9000-18000-R

DPDT, 9~18GHz, Reflective

Features:

- * Low Insertion Loss
- * High Isolation

Applications:

- * Wireless
- * Transmitter
- * Laboratory Test
- * Radar

Electrical

Frequency:	9 ~ 18 GHz
Insertion Loss:	2.6dB max.
Isolation:	60dB min.
VSWR:	2 max.
Input Power:	23dBm max.
Voltage:	+5V, -12V
Current:	100mA, 100mA
On/Off Delay:	150nS max.
Control:	TTL High - 1 TTL Low/NC - 0

Mechanical

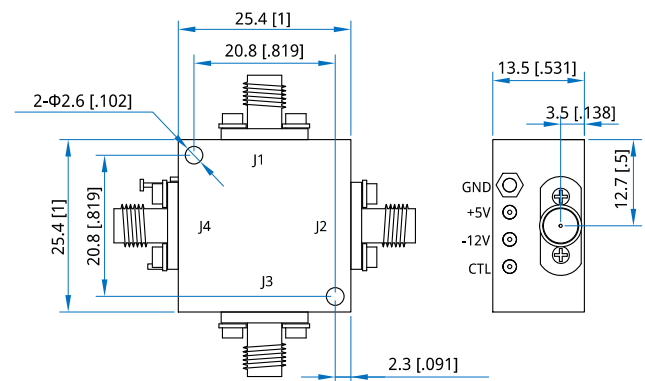
Size*1:	25.4*25.4*13.5mm 1*1*0.531in
RF Connectors:	SMA Female
Power Supply Connectors:	Feed Through/Terminal Post
Housing Material:	Aluminum
Mounting:	2-Φ2.6mm through-hole

[1] Exclude connectors.

Environmental

Operating Temperature:	-40~+85°C
Non-operating Temperature:	-55~+125°C

Outline Drawings



Unit: mm [in]

Tolerance: ±0.2mm [±0.008in]

Control True Table

C	Connection
0	J1 - J2, J3 - J4
1	J1 - J4, J2 - J3

How To Order

NPSD-9000-18000-R

Customization is available upon request.