

Wideband, DC Pass

# Directional Coupler

ZCDC30-18263-S+

50Ω 30dB Up to 20W 18 to 26.5 GHz

## The Big Deal

- Wideband, 18 to 26.5 GHz
- Excellent Coupling Flatness,  $\pm 0.3$  dB typ.
- Power Handling up to 20W



CASE STYLE: HT2536-1

## Product Overview

The Mini-Circuits ZCDC30-18263-S+ wideband directional coupler offers exceptional performance operating over 18 to 26.5 GHz. This coupler has excellent coupling flatness, good directivity, and power handling. It is ideal for lab testing applications as well as for power monitoring over wide bands, among other applications.

## Key Features

Feature	Advantages
Wide bandwidth	With a bandwidth spanning 18 to 26.5 GHz, ZCDC30-18263-S+ coupler is ideal for most lab testing applications, avoiding the need to switch components for different frequency bands.
Excellent Directivity • 17 dB typ. up to 26.5 GHz	High directivity allows sampling of input powers with minimal detrimental effects due to output mismatches.
Excellent coupling flatness, $\pm 0.3$ dB typ	Excellent coupling flatness over the entire frequency range minimizes the need for compensation circuits in most cases.
Good Return Loss (In & Out) • 17 dB typ. up to 26.5 GHz	Good return loss over 18 to 26.5 GHz minimizes undesired reflections and resulting amplitude ripple.

### Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
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## ZCDC30-18263-S+

50Ω 30dB Up to 20W 18 to 26.5 GHz



Generic photo used for illustration purposes only

CASE STYLE: HT2536-1

Connectors SMA-Female Model ZCDC30-18263-S+

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Supplied Termination*	1 W
DC Current	0.6A
Permanent damage may occur if any of these limits are exceeded	
* up to 25°C, derates linearly to 325mW at 100°C.	

### Coaxial Connections

INPUT	IN
OUTPUT	OUT
COUPLED	CPL
TERMINATION (50Ω) INCLUDED	—

### Features

- Wide frequency range, 18 to 26.5 GHz
- Good coupling flatness, ±0.3 dB typ.
- Good directivity, 17 dB typ. up to 26.5 GHz
- Good return loss (In & Out) 17 dB typ. up to 26.5 GHz
- DC pass input to output

### Applications

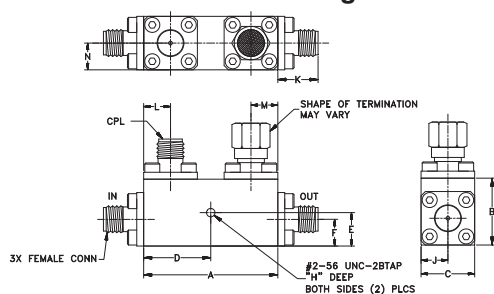
- Cellular infrastructure
- Military
- Lab use

### Electrical Specifications at 25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Operating Frequency		18		26.5	GHz
Nominal Coupling	18-26.5		30±1		dB
Coupling Flatness (±)	18-26.5		0.3	0.6	dB
Mainline Loss <sup>1</sup>	18-26.5		0.6	0.9	dB
Directivity	18-26.5	14.0	21		dB
Return Loss (In & Out)	18-26.5	15.5	26		dB
Return Loss (Coupling)	18-26.5	15.0	24		dB
Input Power <sup>2</sup>				20	W

1. Mainline loss includes coupling loss
2. Up to 25°C, derates linearly to 16W at 100°C.

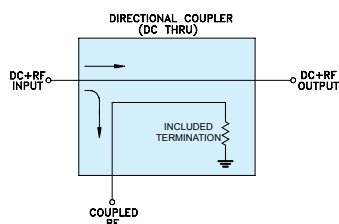
### Outline Drawing



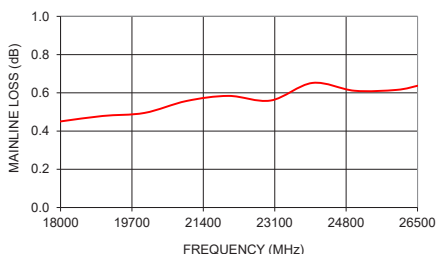
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
1.25	0.63	0.50	0.63	0.313	0.25	--
31.75	16.0	12.7	15.88	7.95	6.35	--
H	J	K	L	M	N	wt
0.120	0.25	0.43	0.25	0.25	0.25	grams
3.05	6.35	10.92	6.35	6.35	6.35	50

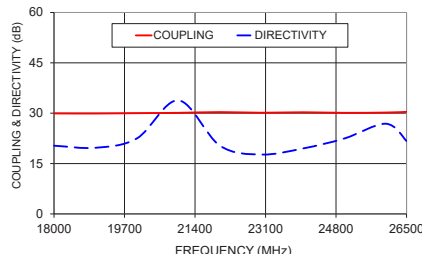
### Electrical Schematic



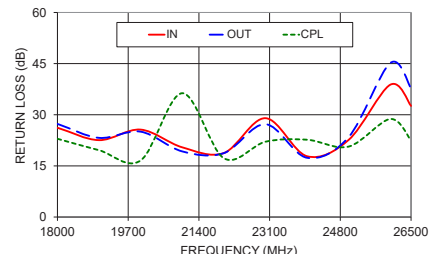
ZCDC30-18263-S+ MAINLINE LOSS



ZCDC30-18263-S+ COUPLING & DIRECTIVITY



ZCDC30-18263-S+ RETURN LOSS



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