DC Pass, High Power

Power Splitter/Combiner ZC16PD-K1844+

16 Way-0° 50Ω 18000 to 40000 MHz

The Big Deal

- Ultra wideband, 18 to 40 GHz
- High Isolation, 22 dB typ.
- 20W power handling
- Low amplitude unbalance, 0.2 dB typ.

CASE STYLE: UU640-2

Product Overview

Mini-Circuits' ZC16PD-K1844+ is a ultra wideband 16-way 0˚ splitter/combiner providing coverage from 18 to 40 GHz, supporting a wide range of applications including 5G, K-Band, Ka-Band, instrumentation and many more. This model provides 20W power handling as a splitter and very low insertion loss across the entire operating frequency range, minimizing power dissipation and delivering excellent signal power transmission from input to output. The ZC16PD-K1844+ comes housed in a case measuring 8.27 x 1.42 x 0.5" with 2.92mm connectors.

Key Features

Feature	Advantages
Ultra-wideband, 18 to 40 GHz	Extremely wide frequency range supports many broadband applications in a single model.
High isolation, 22 dB typ.	Minimizes interference between ports.
High power handling: • 20W as a splitter at 25°C • 1.35W as a combiner	The ZC16PD-K1844+ is suitable for systems with a wide range of power requirements.
Low amplitude unbalance, 0.2 dB	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
DC Passing, 447mA	Supports applications where DC power is needed through the RF line.

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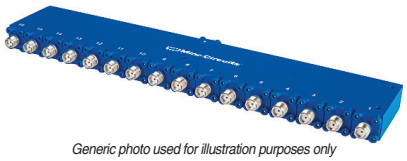


Generic photo used for illustration purposes only

CASE STYLE: UU640-2

Connectors	Model
2.92mm-Fem	ZC16PD-K1844+

+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
Power Input (as a splitter)	20W* max.
Internal Dissipation	1.35W max.
DC Current	447 mA

Permanent damage may occur if any of these limits are exceeded.
* Derate linearly to 10W at 100°C

Coaxial Connections

Sum Port	S
Port 1-16	1-16

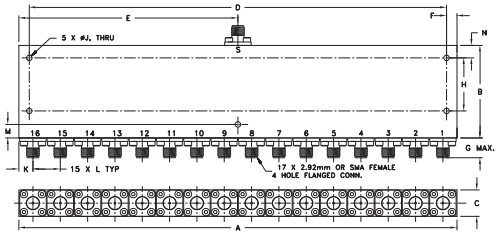
Features

- Ultra wideband, 18000 - 40000 MHz
- Low amplitude unbalance, 0.2 dB typ.
- Excellent VSWR, 1.36:1 typ.
- High isolation, 22 dB typ.

Applications

- Fixed satellite
- 5G
- Mobile
- Space research

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
8.27	1.42	.50	7.953	4.13	.157	.43
210	36.1	12.70	202.0	105	4.0	11

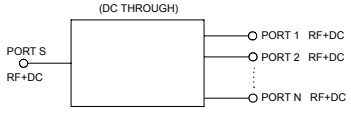
H	J	K	L	M	wt
.945	.10	.27	.52	.394	grams
24.0	2.5	6.86	13.21	10.0	350

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		18000		40000	MHz
Insertion Loss Above 12.0 dB	18000-26500		3.1	4	dB
	26500-40000		4.1	5	
Isolation	18000-26500	16	22		dB
	26500-40000	16	24		
Phase Unbalance (±)[1]	18000-26500		5.9	10	Degree
	26500-40000		8.8	15	
Amplitude Unbalance (±)[1]	18000-26500		0.2	0.4	dB
	26500-40000		0.3	0.6	
VSWR (Port S)	18000-26500		1.36	1.8	:1
	26500-40000		1.21	1.8	
VSWR (Port 1-16)	18000-26500		1.38	1.8	:1
	26500-40000		1.26	1.8	

1. With reference to average

Electrical Schematic

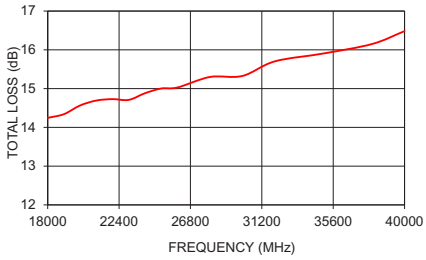


Typical Performance Data

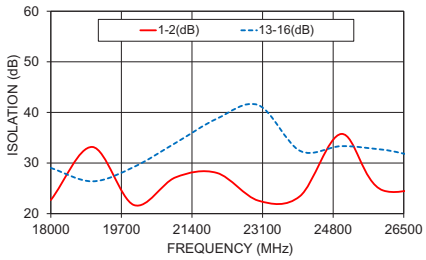
Freq. (MHz)	Total Loss[1] (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR 1
	S-1		1-2	13-16			
18000	14.24	0.10	22.69	29.03	1.90	1.07	1.03
19000	14.34	0.13	33.18	26.39	2.28	1.18	1.21
20000	14.56	0.12	21.71	29.23	3.06	1.30	1.20
21000	14.69	0.14	27.16	33.95	2.61	1.19	1.36
22000	14.73	0.12	28.05	38.77	2.55	1.17	1.36
23000	14.71	0.14	22.56	41.44	2.73	1.09	1.20
24000	14.88	0.18	23.45	32.42	3.32	1.08	1.16
25000	15.00	0.14	35.75	33.34	3.65	1.20	1.07
26000	15.03	0.16	24.59	32.64	2.88	1.09	1.02
28000	15.30	0.26	27.17	30.80	3.58	1.24	1.22
30000	15.33	0.27	26.01	40.28	3.26	1.04	1.21
32000	15.70	0.39	27.74	49.46	3.36	1.20	1.14
35000	15.91	0.53	29.04	33.14	3.50	1.02	1.08
38000	16.15	0.47	33.15	38.66	3.50	1.12	1.26
40000	16.48	0.43	39.57	34.31	4.92	1.13	1.19

1. Total Loss = Insertion Loss +12dB splitter loss.

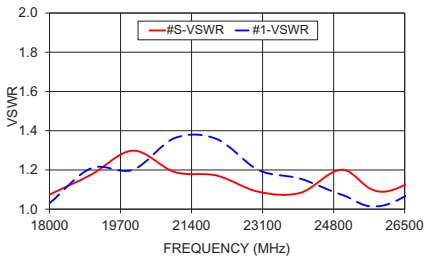
ZC16PD-K1844+
TOTAL LOSS[1]



ZC16PD-K1844+
ISOLATION



ZC16PD-K1844+
VSWR



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.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp