Fused Coupler, Single Window, Low loss C+L Band or S Band

FFCK Series

Key Features

- High-power handling
- Wide range of regular parts readily available
- Proven reliability

Applications

- Signal monitoring in C+L band EDFA or RAMAN amplifier
- Network expansion
- Network monitoring

Compliance

- Telcordia GR-1221

The fused coupler, low loss, C+L band or S band enables the accurate splitting and monitoring of optical signals in single-mode fiber. In addition, JDSU manufacturing technology provides uniquely low excess loss and wavelength dependence, along with low polarization and temperature dependence for both signal and tap ports.

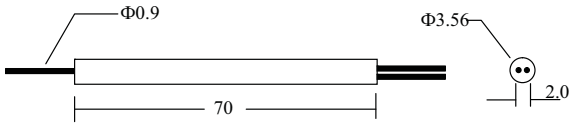
These high-performance standard parts are available in a variety of tap ratios, operating wavelengths, and housing and connector options, and can therefore be specified in a wide range of applications, enabling rapid design cycles and new project builds.

2

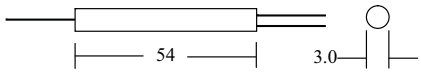
Dimensions Diagrams

Specifications in mm unless otherwise noted

1x2 Models, L-Package



1x2 Models, S-Package



Insertion Loss

Coupling Ratio	Grade	Signal Path Insertion Loss[1,2] (Min./Max.) (dB)	Signal Path WDL[3] Max. (dB)	Signal Path PDL[4] Max. (dB)	Signal Path TDL[5] Max. (dB)	Tap Path Insertion Loss[1,2] (Min./Max.) (dB)	Tap Path WDL[3] Max. (dB)	Tap Path PDL[4] Max. (dB)	Tap Path TDL[5] Max. (dB)
1%	P	NA/0.15	0.04	0.03	0.02	18.2/23.0	0.90	0.20	0.20
1%	A	NA/0.18	0.06	0.05	0.02	17.4/23.0	1.20	0.25	0.20
2%	P	NA/0.18	0.05	0.03	0.02	16.0/18.6	0.60	0.15	0.15
2%	A	NA/0.20	0.07	0.05	0.02	15.2/20.0	1.00	0.20	0.15
3%	P	NA/0.23	0.05	0.03	0.04	14.2/16.5	0.50	0.14	0.15
3%	A	NA/0.28	0.07	0.05	0.04	13.7/17.4	0.90	0.20	0.15
5%	P	NA/0.32	0.06	0.03	0.08	12.1/14.3	0.45	0.12	0.15
5%	A	NA/0.40	0.08	0.05	0.08	11.8/14.8	0.80	0.20	0.15
10%	P	NA/0.60	0.07	0.04	0.08	9.40/11.1	0.40	0.10	0.13
10%	A	NA/0.70	0.09	0.06	0.08	9.00/11.4	0.60	0.15	0.13
20%	P	NA/1.15	0.11	0.05	0.10	6.30/7.90	0.37	0.10	0.10
20%	A	NA/1.25	0.15	0.07	0.10	6.00/8.20	0.55	0.15	0.10
30%	P	NA/1.75	0.15	0.06	0.10	4.60/5.80	0.35	0.10	0.10
30%	A	NA/1.85	0.20	0.08	0.10	4.50/6.00	0.50	0.15	0.10
40%	P	NA/2.50	0.20	0.07	0.10	3.85/4.40	0.30	0.09	0.10
40%	A	NA/2.60	0.30	0.09	0.10	3.70/4.60	0.45	0.11	0.10
50%	P	2.7/3.30	0.25	0.08	0.10	2.70/3.30	0.25	0.08	0.10
50%	A	2.6/3.50	0.40	0.10	0.10	2.60/3.50	0.40	0.10	0.10

1. Tap ratio ≤ five percent, the Insertion Loss including WDL, PDL and TDL; Tap ratio > five percent, the Insertion Loss including WDL and PDL, not including TDL.
2. In 2x2 couplers with a coupling ratio of 20 percent or lower, insertion loss is not specified for launch through second input port (P4).
3. Change in insertion loss over the operating wavelength range.
4. Change in insertion loss over all input polarization states.
5. Change in insertion loss from –5 to 75°C.

Specifications

Parameter		C+L band	S band
Operating wavelength range[1]		1528 to 1605 nm	1425 to 1500 nm
Return loss/directivity	Minimum	55 dB	
Pigtail tensile load	Maximum	5 N	
Optical Power handling[2]	Maximum	4 W	
Operating temperature range[3]		-40 to 75°C	
Storage temperature range		-40 to 85°C	
Environmental qualification		Telcordia GR-1221	
Package dimensions			
S package (D x L)		3.0 x 54 mm	
L package (D x L)		3.6 x 70 mm	
H package (L x W x H)		85 x 17.8 x 7.5 mm	

1. For wavelength within ±5 nm of the specified range performance will be maintained for signal path insertion loss, PDL, TDL, directivity and return loss. The only parameters to increase will be tap insertion loss and WDL. Maximum values of increase are:
   Tap ratio = 1%, maximum tap insertion loss and WDL increase = 0.1 dB.
   Tap ratio = 2 to 9%, maximum tap insertion loss and WDL increase = 0.07 dB.
   Tap ratio = 10 to 50%, maximum tap insertion loss and WDL increase = 0.05 dB.
2. For 1x2 and 2x2 configurations.
3. TDL is specified from –5 to 75°C.

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide, or via e-mail at customer.service@jdsu.com.

Sample: FFCK12H1PB110

FFCK □ □ □ □ □ **B1** □ □

Code	Passband Wavelength
1	C+L band
S	S band

Code	Coupling Ratio
1	1%
2	2%
3	3%
5	5%
A	10%
C	20%
E	30%
H	40%
K	50%

Code	Housing
H	Ø 3.0 mm cable
L	Ø 900 µm fiber
S	Ø 250 µm fiber

Code	Configuration
0	1x1 (attenuator)
1	1x2
2	2x2

Code	Grade
A	Grade A
P	Grade P

Code	Pigtail Length
0	0.5 m
1	1 m
2	2 m
3	3 m
4	4 m
5	5 m
6	6 m
7	7 m
8	8 m
9	9 m
A	10 m

Code	Connectors
0	None
1	FC/PC
2	FC/SPC
3	FC/APC
4	SC/SPC
5	SC/APC
6	BICONIC
7	D4
8	ST
9	FC/UPC
A	SC/UPC
B	LC
C	MU
D	MPX
E	E2000
J	LC/APC
K	LC/APC
L	E2000/APC