

FFE-* -120**/RP Series

1.2 GHz Feederline Equalizer

FEATURES

- Expanded forward path bandwidth to 1.2 GHz
- Expanded return bandwidth with optional 85 MHz return
- Preconfigured with 8 dB or 12 dB of forward equalization
- Housing compatibility with all ARRIS SSP and FFE line passive products
- Pluggable JXP return path attenuation for improved system performance



PRODUCT OVERVIEW

The ARRIS FFE Forward Feederline Equalizer is designed to compensate for feeder cable slope via 1.2 GHz pluggable cable equalizers. The 1.2 GHz FFE offers the optional ability to add return path attenuation for improved signal-to-noise performance and tighter gain variances. The equalizer circuit is contained in the same type of housing as ARRIS's SSP splitters, directional couplers, and power inserters.

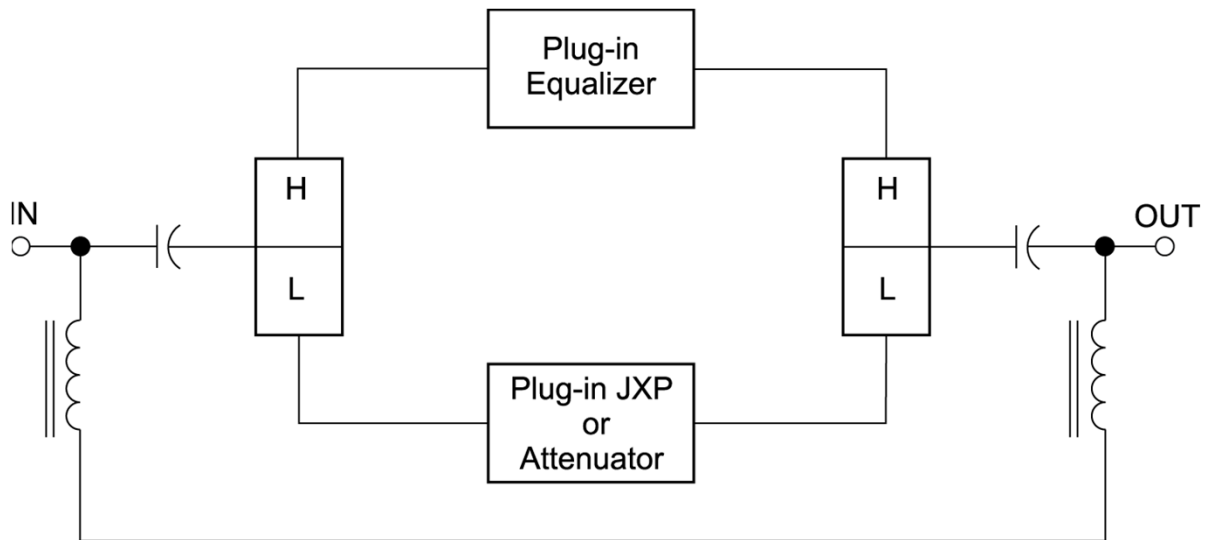
The FFE Forward Feederline Equalizer ships preconfigured with either 8 dB or 12 dB of forward equalization. The FFE supports frequency splits of 42/54 MHz, 65/85 MHz, and 85/102 MHz.

SPECIFICATIONS		
MODEL	FFE-8-120-**/RP-R	FFE-12-120-**/RP-R
PASSBAND		
Return	5-85 MHz	5-85 MHz
Forward	54-1218 MHz	85-1218 MHz
MAXIMUM INSERTION LOSS, FORWARD PATH		
54 MHz	8.7 ± 1.3 dB (42/54 split)	11.3 ± 1.3 dB (42/54 split)
85 MHz	8.7 ± 1.3 dB (65/85 split)	11.3 ± 1.3 dB (65/85 split)
102 MHz	9.2 ± 1.3 dB (85/102 split)	12.2 ± 1.3 dB (85/102 split)
250 MHz	6.0 ± 0.75 dB	8.5 ± 0.75 dB
550 MHz	3.9 ± 0.75 dB	5.5 ± 0.75 dB (42/54 split)
750 MHz	2.9 ± 0.75 dB	3.3 ± 0.75 dB (42/54 and 65/85 splits) 3.5 ± 0.75 dB (85/102 split)
870 MHz	2.1 ± 0.75 dB	2.3 ± 0.75 dB (42/54 and 65/85 splits) 2.5 ± 0.75 dB (85/102 split)
1003 MHz	1.6 ± 0.75 dB	1.7 ± 0.75 dB
1218 MHz	2.1 ± 0.75 dB	2.0 ± 0.75 dB
MAXIMUM INSERTION LOSS, RETURN PATH		
5 MHz	1.0 dB	1.0 dB
42 MHz	1.4 dB	1.4 dB
65 MHz	1.2 dB	1.2 dB
85 MHz	1.7 dB	1.7 dB
Return Flatness	± 0.25 dB	± 0.25 dB
Forward Flatness	± 0.5 dB	± 0.5 dB
MAXIMUM RETURN LOSS, FORWARD PATH		
54–870 MHz	15 dB	15 dB
870 MHz–1.2 GHz	15 dB	15 dB
MAXIMUM RETURN LOSS, RETURN PATH		
5–10 MHz	14.0 dB	14.0 dB
11–30 MHz	16.0 dB	16.0 dB
31–42 MHz	17.0 dB	17.0 dB
5–10 MHz	14.5 dB	14.5 dB
11–30 MHz	16.0 dB	16.0 dB
31–65 MHz	17.0 dB	17.0 dB
5–10 MHz	14.5 dB	14.5 dB
11–30 MHz	16.0 dB	16.0 dB
31–85 MHz	16.0 dB	16.0 dB
MAXIMUM CURRENT	12 A, continuous	12 A, continuous

SPECIFICATIONS CONTINUED

MODEL	FFE-8-120-*/RP-R	FFE-12-120-*/RP-R
HUM MODULATION: PASSIVE @ 10 A CURRENT		
5-40 MHz	-55 dBc	-55 dBc
52-1218 MHz	-60 dBc	-60 dBc
GROUP DELAY, FORWARD PATH		
55.25 to 58.83 MHz	20 ns	20 ns
86.25 to 90.68 MHz	15.5 ns	15.5 ns
103.25 to 106.83 MHz	15.5 ns	15.5 ns
112.25 to 116.68 MHz	14 ns	14 ns
GROUP DELAY, RETURN PATH		
5 to 6.5 MHz	30 ns	30 ns
5.5 to 7 MHz	30 ns	30 ns
10 to 11.5 MHz	7 ns	7 ns
$F_{max} - 1.5 \text{ MHz to } F_{max}$	20 ns	20 ns

FFE-*-120-*/RP-R Block Diagram



ORDERING INFORMATION

Model Name	Part Number	Description
FFE-8-120-42/RP	1511099-001	1.2 GHz Feederline Equalizer. Shipped with 8 dB plug-in forward equalizer installed; capability to install return path JXP pad. 42/54 MHz split - RoHS Compliant
FFE-8-120-65/RP	1511099-002	1.2 GHz Feederline Equalizer. Shipped with 8 dB plug-in forward equalizer installed; capability to install return path JXP pad. 65/85 MHz split - RoHS Compliant
FFE-8-120-85/RP	1511099-003	1.2 GHz Feederline Equalizer. Shipped with 8 dB plug-in forward equalizer installed; capability to install return path JXP pad. 85/102 MHz split - RoHS Compliant
FFE-12-120-42/RP	1511099-004	1.2 GHz Feederline Equalizer. Shipped with 12 dB plug-in forward equalizer installed; capability to install return path JXP pad. 42/54 MHz split - RoHS Compliant
FFE-12-120-65/RP	1511099-005	1.2 GHz Feederline Equalizer. Shipped with 12 dB plug-in forward equalizer installed; capability to install return path JXP pad. 65/85 MHz split - RoHS Compliant
FFE-12-120-85/RP	1511099-006	1.2 GHz Feederline Equalizer. Shipped with 12 dB plug-in forward equalizer installed; capability to install return path JXP pad. 85/102 MHz split - RoHS Compliant
Optional Accessories		
JXP-*B	531186-XXX-00	Plug-in breakaway attenuator/pad (values 0 to 26 dB, in 1 dB steps)

RELATED PRODUCTS

SSP-Q Series System Passives	RF Amplifiers
FFT-Q Series System Taps	Optical Nodes
T-*-Q 1.2 GHz Tap Plug-ins	Headend Optics

Customer Care

Contact Customer Care for product information and sales:

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Note: Specifications are subject to change without notice.

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