

Docsis 3.1 DATA-TV filter with diplexer

With the introduction of Docsis 3.1, most in-home networks are not suitable for the enhanced frequency ranges; both forward (258-1218MHz) and return (5-204). E.g. most in-home outlets have an FM-port, making the FM unusable for Docsis 3.1 return path data.

The Docsis 3.1 DATA-TV filter offers the possibility to separate the Docsis 3.1 signals at the Home Network Interface, i.e. at the interface between the distribution network and the in-home network. In that way, what happens in the in-home network is not influenced by the new frequency bands, and the need to update is reduced. Also, the distribution network is shielded against any disturbance picked-up in the in-home network in the return path band. The Docsis 3.1 DATA-TV filter contains a diplexer, which reduces the insertion loss in the return path band.



Type	DVU 1-4 1G3	DVU 1-4	DVU85 1-4
Version	Diplex	Diplex	Diplex
Item no.	41139	41138	41142
DATA			
Frequency forward	258-1300 MHz	87-1006 MHz	108-1300 MHz
Frequency reverse	5-204 MHz	5-65 MHz	5-85 MHz
Insertion loss forward	4.0(±1.0) dB	4.0(±0.8) dB	4.0(±1.0) dB
Insertion loss reverse	0.8 (±0.6) dB	0.6 (±0.6) dB	0.8 (±0.6) dB
Return loss	Grade 2*	Grade 2*	Grade 2*
Isolation to DATA-TV (reverse range)	>50 dB	>50 dB	>45 dB
Isolation to DATA-TV (forward range)	>20 dB	>20 dB	>20 dB
TV			
Frequency range	258-1300 MHz	87.5-1006 MHz	108-1300 MHz
Insertion loss	4.0(±1) dB	4.0(±0.8) dB	4.0(±0.8) dB 102-108MHz <10 dB
Return loss	Grade 2*	Grade 2*	Grade 2*
Common			
Input return loss (5-1300 MHz)		Grade 2*	
Connectors		F-Female	
Screening effectiveness (5-30 MHz)		> 90 dB	
(30-300 MHz)		> 85 dB	
(300-470 MHz)		> 80 dB	
(470-1300 MHz)		> 75 dB	
Operating temperature		0°C - 55°C	
Dimensions (H x W x D)		19 x 66.5 x 50 mm	

* According to CENELEC EN6028-4; return loss Grade 2:

5-47 MHz ≥ 18 dB
47-1300 MHz ≥ 18 dB ÷ 1.5/oct.