

DSL4226004

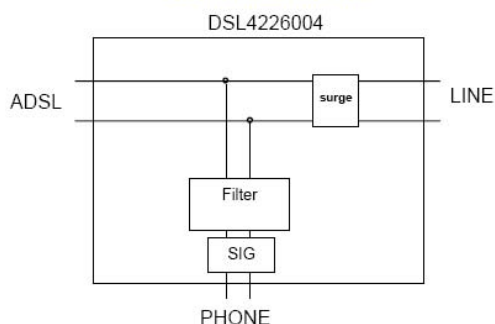
ADSL over POTS CPE Splitter

Master Splitter DSL4226004

Netherland ADSL Splitter Solution for ADSL over POTS



ELECTRICAL SCHEMATIC



► The DSL4226004 is a splitter which has been designed to implement the functionality of low pass filter in an ADSL over POTS application.

Asymmetric Digital Subscriber Line (ADSL) is a technology used to transmit broadband information over existing copper wires that connect home and businesses to the Public Switched Telephone Network (PSTN). ADSL is very viable technology to support high-speed access, enabling a theoretical maximum downstream rate of 9Mbps and a maximum upstream rate of 640kbps. POTS service can coexist with ADSL without interruption or degradation of service due to the filtering action of the ADSL/POTS splitter.

Overvoltage protection-circuitry is embedded in the splitter design due to the presence on the line of both digital telephone services (POTS) and ADSL services. An additional ADSL high pass filter is usually integrated at the input of the ADSL modem.

The DSL4226004 is functionally a low pass filter which separates the transmission of POTS signals and ADSL band signals. A second purpose is to isolate poorly balanced POTS equipment from the line at ADSL band frequencies in order to prevent unnecessary egress (and ingress) from ADSL signals. As the POTS splitter connects directly to the Subscriber Line media, it must also provide some protection for externally induced line hits or faults which could damage any attached equipment or endanger.

Technical Specifications

■ General features

- | | |
|---|---|
| <ul style="list-style-type: none"> Design to meet ITU-T G992.1 Annex E1
$Z_{real1} = 600\Omega$ | <ul style="list-style-type: none"> Signature components according to TR 101 728 v1.2.1 |
| <ul style="list-style-type: none"> Low pass filter for ADSL over POTS | <ul style="list-style-type: none"> Specifications valid with DC current of up to 80mA |
| <ul style="list-style-type: none"> New compact casing | <ul style="list-style-type: none"> Compliant and listed with CE |
| <ul style="list-style-type: none"> Overvoltage protections included | <ul style="list-style-type: none"> No external power required |

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DSL4226004 data sheet Ed.02.
Product specifications subject to change without prior notice.

■ Electrical performances DSL4226004

Parameter	Range	Performances
Line impedance Z_r	300Hz - 3,4kHz	600 Ω
DC loop current		100mA max
Insertion loss	@ 1kHz	< 0,3dB
Insertion distortion	200Hz - 4kHz	\pm 1dB
Band attenuation	32kHz - 1,1MHz	> 55dB
Return loss	300Hz - 500Hz	> 14dB
	500Hz - 2000Hz	> 18dB
	2000Hz - 3400Hz	> 14dB
Delay distortion	300Hz - 500Hz	< 250 μ s
	500Hz - 2000Hz	< 200 μ s
	2000Hz - 3400Hz	< 250 μ s
DC resistance (Tip + Ring)		< 50 Ω
Isolation resistance Tip / Ring Tip+Ring / GND	100Vdc	> 1M Ω
		> 10M Ω
Longitudinal conversion loss	15Hz - 50Hz	> 40dB
	50Hz - 600Hz	> 46dB
	600Hz - 3400Hz	> 52dB

■ General specifications

- Safety, EMC**
 - EN 60950
 - ETS 300 386-1-1 / EN 55022 / 55024
 - ITU-T K21
- Temperatures**
 - Operating : ETS EN 300 019-1-3 (class 3.2)
-5°C to +45°C
 - Transport: ETS EN 300 019-1-2 (class 2.3)
-40°C to +85°C
 - Storage : ETS EN 300 019-1-1 (class 1.1)
-40°C to +85°C
- Dimensions** - 72 x 66 x 24 mm (LxWxH)
- Weight** - 50g
- Signature components (1%)**
 - $R_1 = 215k\Omega$
 - $Z_1 = 24V$
 - D = silicon diode (e.g. 1N4007)



■ Connectors

Signal	LINE	ADSL	PHONE
Connector type	RJ11 (3-4) + Terminal block	RJ11 (3-4)	RJ11 (3-4) + Terminal block

