

MODEL NUMBER:
DPL200M

**PULSE LIMITER WITH
FUSE LAMP DPL200M-F**



DESCRIPTION

The EMC Shop's DPL200M (Diode Pulse Limiter) is built with a 10 dB high power attenuator and fuse lamp to protect equipment when measuring spectra with high energy. Due to the built-in fuse lamp overload situations of sensitive equipment can be identified fast and reliably preventing expensive equipment defects. The level frequency response allows high measurement accuracy, even if only a few sample values are used for correction.

FEATURES:

Frequency Range	DC ... 200 MHz
Voltage Range with out Clipping	< 100 dB μ V
Impedance	50 Ω
Insertion Loss	10 dB +/- 0.5 dB
Frequency Response	< +/- 0.5 dB
Input Connector female	BNC or N
Output Connector male	BNC or N
Fuse Lamp	Osram 2306
Replacement Lamp under Cover	6 V 0.03 A
Width	28 mm
Height	36 mm
Length	88 mm
Weight	150 g

APPLICATION:

DPL200M should protect the receiver input from excessive disturbance levels of more than 100 dB μ V whilst smaller levels can pass with a fixed attenuation of 10 dB to the receiver input. The input side of the DPL200M has to be connected with the disturbance source e.g. the LISN, the output side has to be connected with the meter which needs to be protected. If there are very high levels they will be cut in the time domain. The excessive energy is converted into light in the little bulb.

Cutting the signal in the time domain means - after a Fourier transformation - that additional spectral lines emerge in the frequency domain (intermodulation). In such a case the receiver input wasm successfully protected, however the measurement has to be rejected as invalid. Means to improve the disturbance characteristics could fail as some of the spectral lines might not come from the DuT but from the limitation process. It is even possible and has been observed in practical measurements that a DuT produces high level disturbances in the frequency range below the relevant range. The emerging phantom spectral lines however occur in the

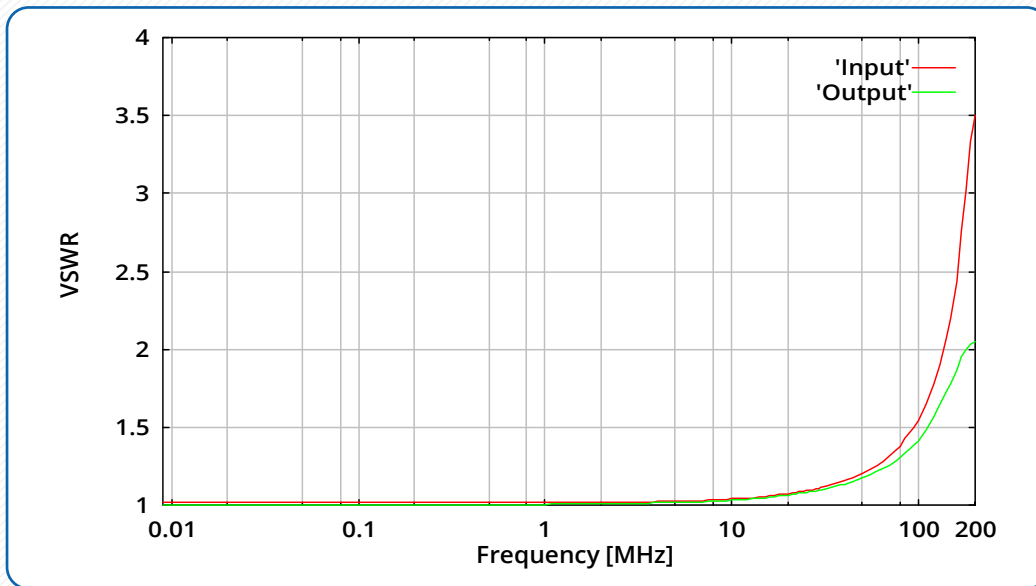
frequency range that has to be compliant with a standard and these lines exceed the limit. Since the violation of the limit has not been caused by the DuT but by the limitation process itself it still could be that the device is compliant to the standard. A typical example for this group of devices is an electric fencing kit. Such devices have to be measured again without the presence of a non linear pulse limiter. To protect the receiver input high value attenuators can be used. Attenuators are linear and do not produce any phantom spectral lines. Except for the spectrum which disappears in the noise floor the shape and frequency of the spectral lines should be identical.

1.) The limitation process is visible by a glowing of the bulb. A glowing bulb means that the measurement result is invalid because it is based on intermodulation and phantom spectra.

2.) Extreme high levels of disturbance voltage destroy the bulb and not the limiter itself. The connection to the receiver input will be interrupted and the meter is well protected. Only the bulb has to be exchanged. One spare bulb is enclosed inside the housing which may be opened for this purpose. Further spare bulbs can be ordered from us. When ordering please tell us the serial number of your DPL200M since the high frequency properties of the bulb do influence the attenuation of the limiter. We deliver selected and specially for your S/N assorted spare lamps.

3.) On request we can assemble various connectors to the in- and output e.g. N-female, N-male, BNC-female, BNC-male.

TYPICAL VOLTAGE STANDING WAVE RATIO



TYPICAL FORWARD TRANSMISSION IN DB

