

BUY NOW



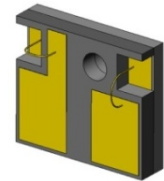
0.7mm Movement Free Space *et*MEMS™ Attenuator/Shutter

(US patents pending)

Product Description

The *et*MEMS™ series of free space variable optical attenuator (FS-VOA) is based on a proprietary patent pending micro-electro-mechanical mechanism featuring exceptionally compact size with large shutter movement, simple construction, and easy direct drive. The FS-VOA is designed to completely block a collimated light beam over 700 μm in diameter and be operated in air without the need for hermetic seal and is fully compliant with the Telcordia 1209 and 1221 reliability standards. The device is ideally suited to be integrated into laser and receiver systems.

It is available in either normally-open or normally-closed configurations.



Performance Specifications

FS-VOA/Shutter	Min	Typical	Max	Unit
Attenuation Resolution		Continuous		
Aperture Diameter		750		μm
Response Time ^[1]		40	75	ms
Optical Power Handling		500		mW
Driving Voltage ^[2]		4	5	V
Device Resistance		100 ^[3]		ohm
Power Consumption			210	mW
Resonant Frequency	250	310		Hz
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C
Reliability		Telcordia 1209 and 1221		
Package Dimension		See drawing below		mm

Notes:

[1]. For any desired attenuation. 50ms time constant of control signal is recommended to eliminate the low frequency resonance ≤ 200 Hz. Please refer to Agiltron's design of driving circuit to eliminate the low frequency resonance.

[2]. For full attenuation.

[3]. At voltage 4V.

Features

- Compact
- High Reliability
- Direct drive
- Low IL, PDL, WDL & TDJ
- Intrinsic tolerance to ESD

Applications

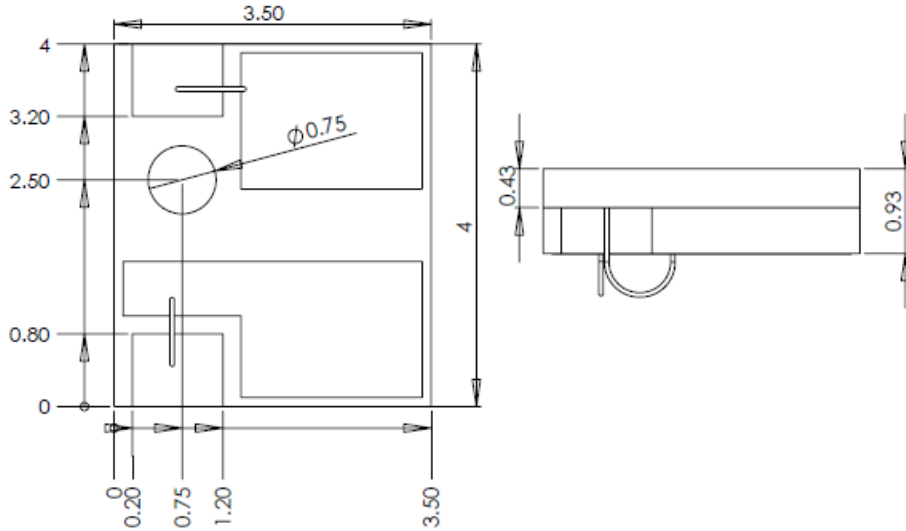
- Power Control
- Power Regulate
- Channel Balance
- Instrumentation



Revised on 5/2/21
(Click here for latest revision)

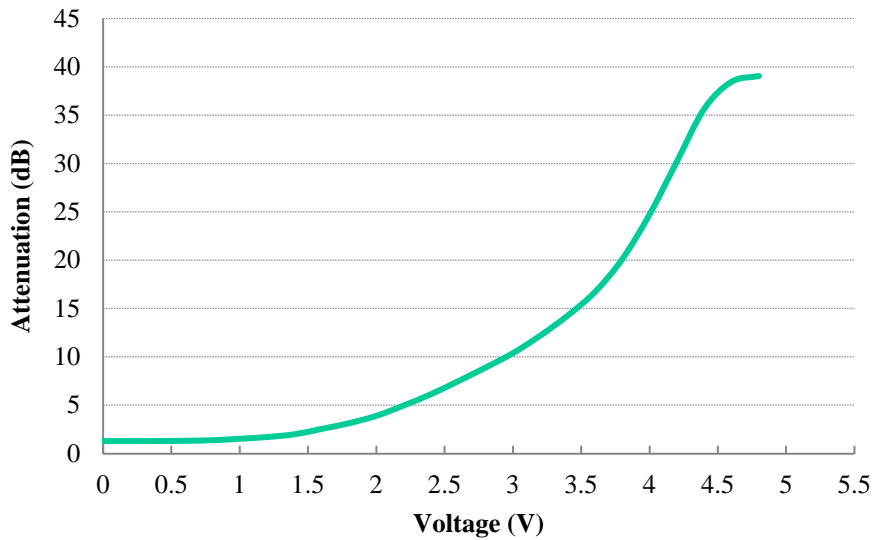
Free Space etMEMS™ Attenuator/Shutter

Mechanical Footprint Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

VOA Performance

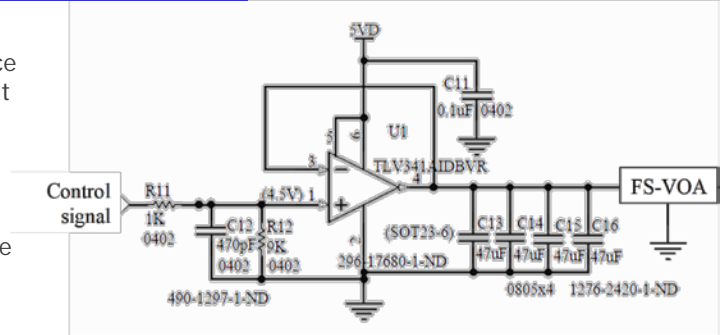


Free Space eMEMS™ Attenuator/Shutter

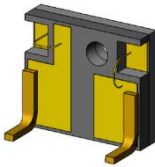
Control electronics

NOTES

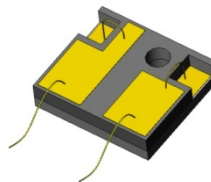
- Electrode pads on front surface are for control voltage without polarity.
- More than 6V on electrodes is prohibited.
- The driver design on right is recommended to eliminate the low frequency resonance.



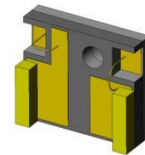
L-pins



Flying wires



Mounting shorts



Ordering Information

FSVOA-	7 0	1	<input type="checkbox"/> [1]	1	<input type="checkbox"/>	1	<input type="checkbox"/>	1
	Aperture Size	Waveband	VOA type	Shutter Surface	Package Configuration	Chip design	Electric connection	
	Φ700um = 70	Broadband = 1	Bright=1 Dark=0	Gold coated=1	Standard =1 Special =0	Standard = 1 Special = 0	No pin= 0 L pin= 1 Flying Wires= 2 Mounting shorts= 3	

[1]. Dark type VOA has the different aperture center, please contact us.

