

## 0.5mm Movement Free Space *et*MEMS™ Attenuator/Shutter (US patents pending)

### Product Description

The *et*MEMS™ series 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 *et*MEMS™ series FS VOA is designed to completely block a collimated light beam over 500 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 systems.

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



### Features

- Compact
- High Reliability
- Low IL, PDL, WDL & TDL
- Intrinsic tolerance to ESD

### Performance Specifications

FS Series VOA/Shutter	Min	Typical	Max	Unit
Attenuation Resolution	Continuous			
Aperture Size	500			μm
Response Time	20	60		ms
Optical Power Handling	500			mW
Driving Voltage <sup>[1]</sup>	3.5	4.5		V
Device Resistance	70 <sup>[2]</sup>	100		ohm
Power Consumption	195			mW
Operating Temperature	-5	75		°C
Storage Temperature	-40	85		°C
Reliability	Telcordia 1209 and 1221			
Package Dimension	See drawing below			mm

#### Notes:

- [1]. For full dynamic range.  
[2]. At voltage 3.5V.

### Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation

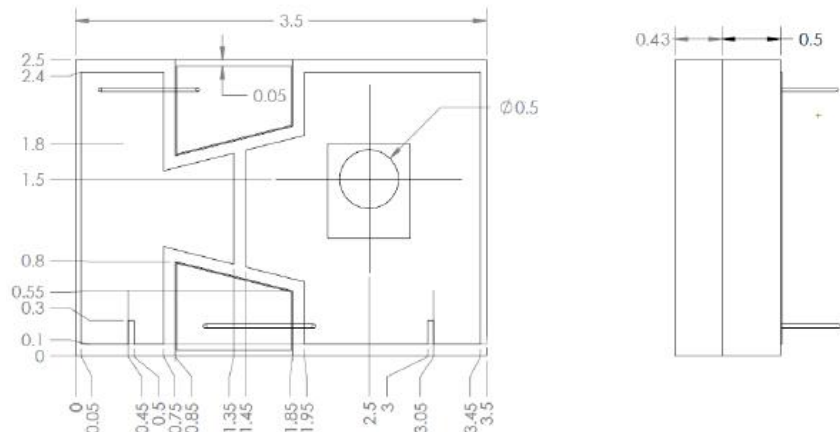


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## Free Space etMEMS™ Attenuator/Shutter

### Mechanical Footprint Dimensions (mm)

Standard Package (No Pin, bright configuration)



### Electrical Driving Instruction

- Electrode pads on front surface are for control voltage without polarity.
- Do not apply the voltage more than 5V.

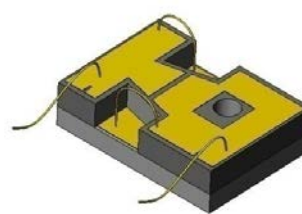
### Ordering Information

FSVOA-	50	1	<input type="checkbox"/>	1	<input type="checkbox"/>	1	<input type="checkbox"/>	1
	Aperture Size		Off State	Shutter Surface	Chip Configuration		Electrical Connection	
	500um =50		Bright=1 Dark=0	Gold coated=1	Standard =1 Special =0		No pin= 0 L pin= 1 Flying Wires= 2 Mounting shorts= 3	

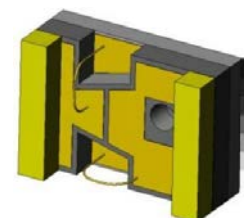
L-pins



Flying Wires



Mounting Shorts



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