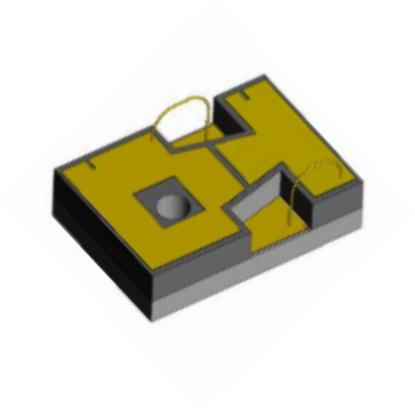
0.3mm Movement Free Space *et*MEMS™ Attenuator Sub-mount

(Protected by US patent 10752492B2)

DATASHEET

BUY NOW



The ***et*MEMS™** series of free space variable optic 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 ***et*MEMS™** series of FS-VOA is designed to block a collimated light beam completely <= 400μm in diameter and be operated in the air without the need for a 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. The different movement FS-VOA chip up to 700μm is available,

Features

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

Specifications

Parameter	Min	Typical	Max	Unit
Attenuation Resolution		Continuous		
Shutter Movement		300		μm
Response Time		20	40	ms
Optical Power Handling		500		mW
Driving Voltage [1]		3.6	4.0	V
Device Resistance		60 [2]	95	Ohm
Power Consumption		170	210	mW
Resonant Frequency	1000			Hz
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C
Reliability	Telcordia 1209 and 1221			
Package Dimension	See drawing below			

Note:

[1]. For full dynamic range.

[2]. At voltage 3.6V.

Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation

Rev 02/09/24

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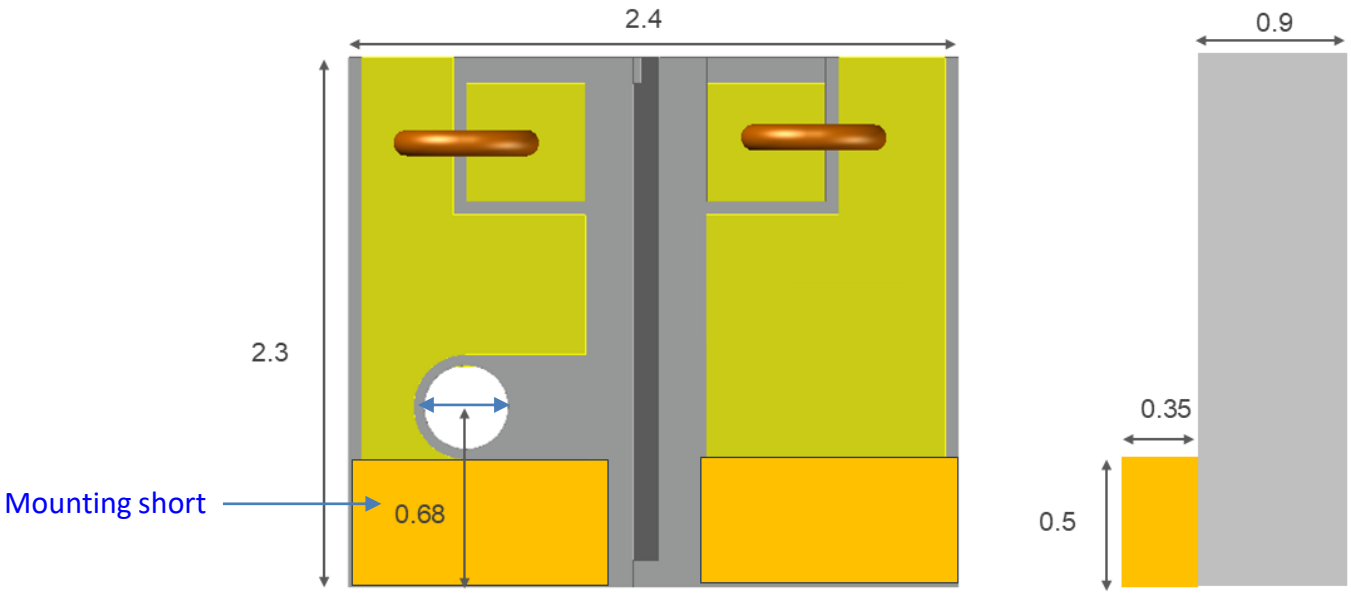
Mechanical Footprint Dimensions (mm)

Chip on Sub-mount: Normally-open with ϕ300 aperture



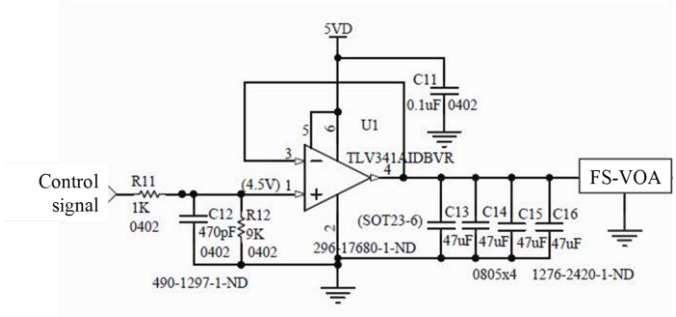
Note: The variety of chips and customization are available, please contact us.

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

Electronic Driving Instruction

NOTES:

- Resistive without polarity
- Applying >4.2V will burn the chip
- Two pads are for applying a voltage
- Reference driving circuit on the right



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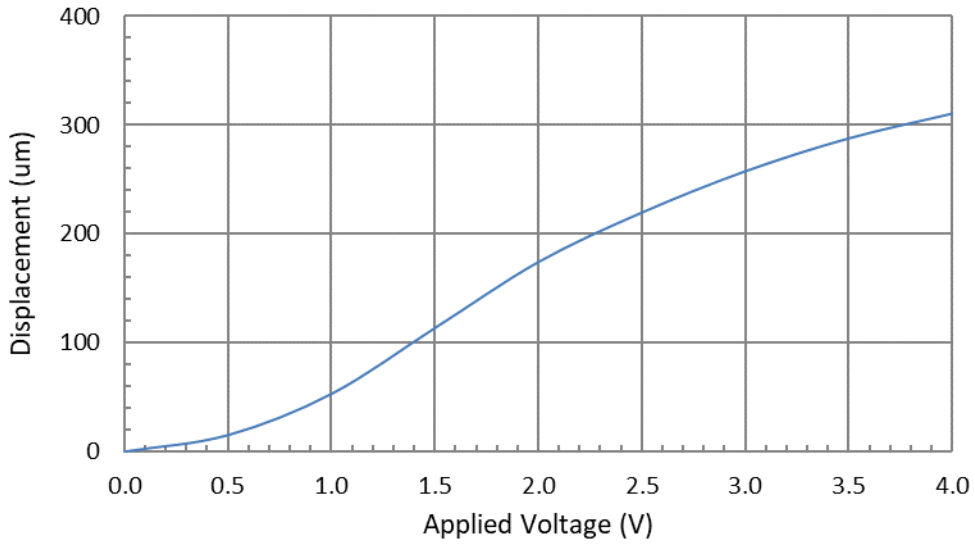
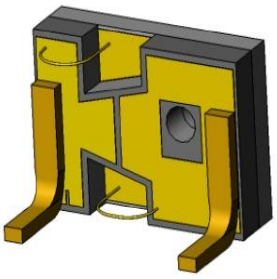
Shutter Performance (Typical)

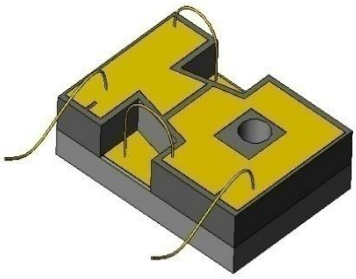


Electronic Pin Option for sub-mount (Illustration)

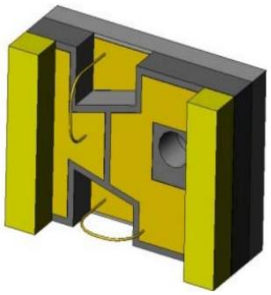
L-pins



Flying Wires



Mounting Shorts



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Ordering Information

	3 0	1	☐	1	☐	☐	☐	1
Prefix	**Shutter size**	**Wavelength**	**VOA Type**	**Shutter Surface**	**Chip Package**	**Chip Design**	**Electric connection**	**Package**
FSVOA-	Ø300um = 30	Broadband = 1	Standard (normally open) = 1 Special = 0	Gold = 1	Bare = 2 Sub-mount = 1 Special = 0	Standard = 1 Special = 0	No PIN = 0 L Pin = 1 Flying Wires = 2 Mounting shorts = 3	Sub-mount = 1

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