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PHOTONWARES

0.5mm Movement Free Space *et*MEMS™ Attenuator/Shutter Chip

(Protected by US patents pending)

Product Description

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 completely block a collimated light beam <= 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.

The different movement FS-VOA chip up to 700um is available, please contact us.

Features

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

Applications

- Power Control
- Power Regulate
- Channel Balance
- Instrumentation

Performance Specifications

FS Series VOA/Shutter	Min	Typical	Max	Unit
Attenuation Resolution		Continuous		
Shutter Movement		500		μm
Response Time		20	40	ms
Optical Power Handling		500		mW
Driving Voltage[1]		3.5	4.5	V
Device Resistance		70 [2]	100	Ohm
Power Consumption		210	250	mW
Resonant Frequency	200			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 full dynamic range.

[2]. At voltage 4V.

RoHS Compliant

Revised on 5/2/21

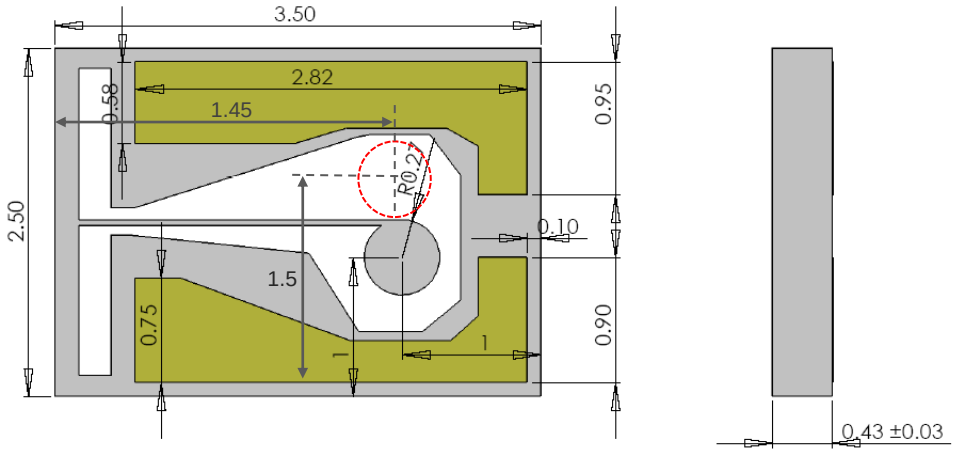
(Click here for latest revision)

15 Presidential Way, Woburn, MA 01801 Tel: (781) 935-1200 Fax: (781) 935-2040

www.agiltron.com

Free Space *et*MEMS™ Attenuator/Shutter Chip

Mechanical Footprint Dimensions (mm)

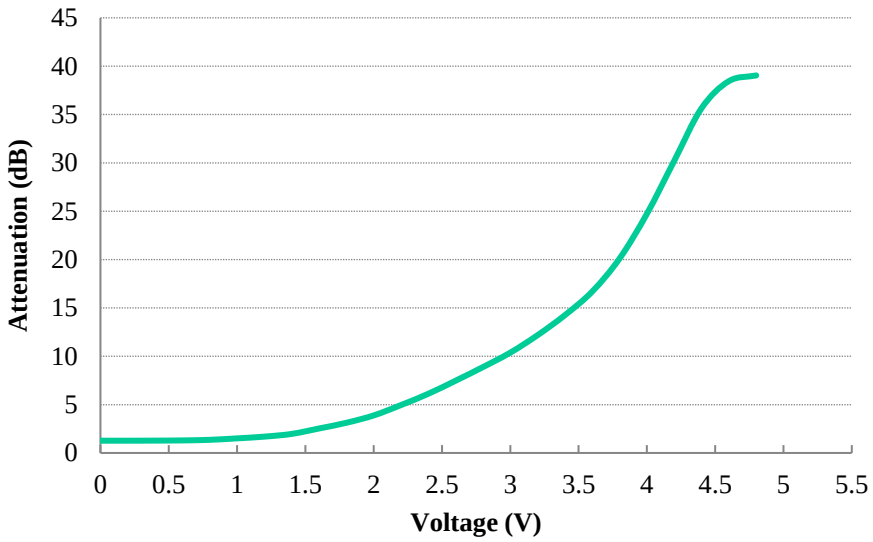


NOTES

- The red dash-line represents the shutter's position under ~4.5V.

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

VOA Performance



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Electronic Driving Instruction

NOTES

- Electrode pads on front surface are for control voltage without polarity.
- Do not apply more than 6V.

Order Instruction

P/N: FSVOA-50111010C (Standard)

FSVOA -	5 0	1	☐	1	0	☐	0	C
	Shutter size	Wavelength	VOA type	Shutter surface	Package Configuration	Chip design	Electric connection	
	ϕ500um = 50[1]	Broadband =1	Standard = 1 Special = 0	Gold coated = 1	Standard = 1 No hold-chip = 0	Standard = 1 Special = 0	No PIN = 0	Bare chip = C

[1]. The different shutter size is available, please check other size FS-VOA chip data sheet.
[2]. The different orientation or customization might be available, please contact us.

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