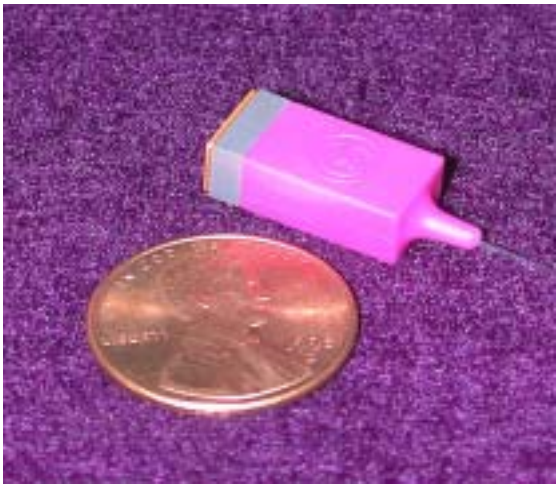
MEMS Variable Optical Attenuator



MegaSense's complete MEMS-based VOA product line offers exceptional performance at an unprecedented low cost. These products offer low insertion loss, high resolution and rapid response speed across a broad attenuation range. MegaSense's VOAs are capable of satisfying a variety of unique customer requirements and specifications in order to provide a time-to-market advantage, including multi-channel array configurations. Given the substantial cost advantages of MegaSense's VOAs, they are particularly suited for the emerging wavelength dependent applications.

Performance

- low insertion loss
- low PDL
- low WDL *(patent pending)*
- low back reflection
- fast response time
- high thermal stability
- high optical power handling
- extremely small packaged size *(patent pending)*

Premium Options

- individual calibration data
- maximum attenuation at power off
- preset level of attenuation at power off
- superior linearity option *(patent pending)*
- low driving voltage (0-5V)
- multi-channel array configurations
- open or closed loop module
- hybrid packaging with tap and photo diode
- analog or digital interface

Applications

- attenuation and equalization
- erbium doped fiber amplifiers
- optical add/drop
- optical cross-connects
- pre-emphasis
- wavelength division multiplexers
- test and measurement/instrumentation
- array configurable for multi-channel applications

Optical Parameters

operating wavelength	C band (C + L band available)
attenuation range	0-30 dB minimum
insertion loss	0.8 dB maximum
return loss	55 dB minimum
polarization dependent loss	0.2 dB maximum (1)
wavelength dependent loss	0.4 dB (2)
optical power	300 mW maximum
response speed	2 ms typical

Electrical Parameters

DC drive voltage range	15 V (3)
absolute maximum voltage	22 V
power consumption	0.1 mW maximum (4)

Environmental Parameters

operating temperature	-5 to 70^{o}C
storage temperature	-40 to 85^{o}C

Dimensions

footprint on PCB	7.6 x 15.5 mm
height to PCB	6.4 mm

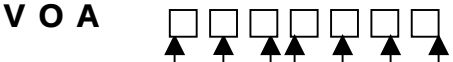
(1). 0.2dB PDL is measured across 0-20dB range

(2). 0.4dB WDL is measured across 0-20dB range

(3). precise voltage range device dependent

(4). electrostatically actuated; nearly zero power consumption at stable setting

Ordering Information



Tap configuration
0 = none
1 = input
2 = output
3 = input and output

Spectrum coverage
0 = wideband
1 = single channel
2 = narrow band

Attenuation set at power off
0 = zero attenuation
M = maximum attenuation
X = other attenuation

Operational band
C = C band
L = L band
Z = C + L band
X = other

Connector type
0 = none
1 = SC/PC
2 = FC/PC
3 = ST/PC
X = other

Fiber length
1 = 1.0 meter
X = other

Fiber type
0 = 250 μm
X = other

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Free VOA samples are available for qualified customers