

MGASxx-A1

Product Overview

These modulators have been specially designed for wavelengths in the range of 1300-1600 nm. They are based on doped glass with the advantage of having a low RF power consumption as well as an insensitivity to polarisation. They can be used as intensity modulators and frequency shifters (fixed and variable).

FEATURES

- Low RF power.
- Insensitive to polarization.
- High diffraction efficiency



SPECIFICATIONS (T=25°C)

PARAMETER	RATING	UNIT
Material-Acoustic mode-Velocity	Doped Glass - 2520	m/s
Optical Wavelength range (λ)	1300-1600	nm
Transmission	≥ 93	%
Input / Output Polarization	Random/Linear	
Active Aperture	1 x 2	mm ²
Rise/fall time (T _r)	270	ns/mm
Static Extinction Ratio	>30	dB
Diffraction Efficiency*	>80	%
Optical power density	0.5	W/mm ²
Input impedance	50	Ω
V.S.W.R.	< 1.2:1	
RF power	0.5	W
Connector	SMA female	
Size	59.5 x 22.4 x 17.3	mm ³
Weight	Nom 50	g
Packaging	IN PRO 004	
Operating Temperature (non condensing)	+10 to +40	°C
Storage Temperature (non condensing)	-40 to +65	°C
RoHS Compliance	Yes	

*Diffraction efficiency is beam diameter and wavelength dependant.

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Versions

	MGAS40-A1	MGAS80-A1	MGAS110-A1
Carrier frequency/Frequency	+/- 40 MHz	+/- 80 MHz	+/- 110 MHz
Separation angle 0-1	>20 mrad	>41 mrad	>58 mrad
Recommended Beam diameter (1/e ²)	0.5-0.8 mm	0.6-0.8 mm	0.54-0.8 mm
Option Variable frequency	MGAS40-B4A1 40 +/- 2 MHz Efficiency typ >70 %	MGAS80-B5A1 40 +/- 2.5 MHz Efficiency typ >70 %	MGAS110-B5A1 40 +/- 2.5 MHz Efficiency typ >70 %

$$T_r = 0.66 \frac{\phi}{V} * F_{-3dB} = \frac{0.48}{T_r} * \Delta\theta = \frac{\lambda F}{V} * \frac{P_1}{P_2} = \frac{\lambda_1}{\lambda_2}$$

OUTLINE DRAWING IN PRO 004, mm

