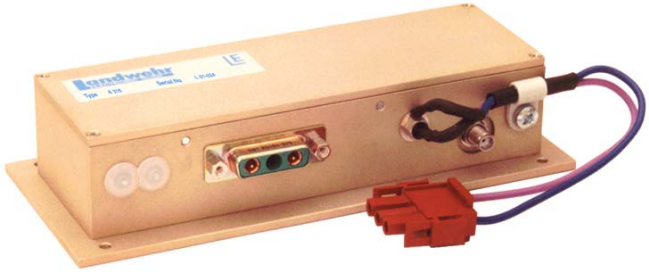
AOM Driver for Low Power Acousto-Optic Applications

A 316

With the A 316 Landwehr offers a SAW (surface acoustic wave) controlled oscillator driver for acousto-optic applications. The A 316 is one type of low power driver of a completely new developed driver generation which allows analogue modulation with an AOM (acousto-optic modulator) device. The oscillator frequency is generated directly so that frequency doubling is no longer necessary. High technical performance guarantees wide modulation bandwidth and excellent switching.



Technical Data

Sine wave oscillator frequency	250 MHz ± 0.03%, SAW controlled
Frequency drift	$\Delta f / {}^0C < \pm 50$ ppm
Output frequency of driver	$f_0 = 250$ MHz
Spectral purity	<−60 dBc @ $f_0 \pm 200$ MHz
Harmonic	<−20 dBc @ $2f_0 = 500$ MHz
Analogue modulation control input	standard: 0 ... +1 volt into 50 Ω optional: 0 ... +5 volt into 600 Ω
Analogue voltage = 0 V or open input Analogue voltage = 1 V (5 V)	rf power output ⇨ off maximum rf power output ⇨ on
RF on-/off-ratio analogue RF on-/off-ratio analogue	> 33 dB at any output level @ 600 Ω > 37 dB at any output level @ 50 Ω

Landwehr Electronic GmbH · Stettiner Straße 7 · D-22850 Norderstedt, Germany
Phone [int +49] (0)40 528899-0 · Fax [int +49] (0)40 5282863 · E-Mail info@le-tronic.com

RF switch-on / switch-off time	< 4 nsec @ P_{RF}: 10...90 % @ 50 Ω
Modulation bandwidth Modulation bandwidth	dc ... >50 MHz @ 50 Ω dc ... <10 MHz @ 600 Ω
RF output power level	< +23 ... >+28 dBm @ 50 Ω, amplifier is protected against load mismatch
RF output stability	warm-up time (10 min) <± 5 % after warm-up time <± 2 %
Supply voltage	U_S = 24 V ± 0.5 V
Supply current	I_S = 510 mA ± 50 mA

Connectors and Mechanics

RF-Connector	SMA female		
3 pin cable connector for power supply voltage • AMP MATE-N-LOCK	Pin 1 Pin 3	+24 V GND	violet blue
Logic control connector	Cannon • D-Sub 3w3 female		
Housing Mounting plate	150 mm x 50 mm x 33 mm 165 mm x 70 mm x 3 mm		

Absolute Maximum Ratings

Supply voltage	+28 V
Analogue video control input	-0.5 V up to +7 V @ 600 Ω -0.5 V up to +1.5 V @ 50 Ω
Case temperature	+55 ^{0}C • the driver must be mounted on an adequate heatsink

Quality Standards

EMC-standards	VDE 0871 - B FCC Rules Part 15 - B
Functional test	100 %
Burn-in test	passive 2 h active ½ h

Landwehr Electronic GmbH · Stettiner Straße 7 · D-22850 Norderstedt, Germany
Phone [int +49] (0)40 528899-0 · Fax [int +49] (0)40 5282863 · E-Mail info@le-tronic.com