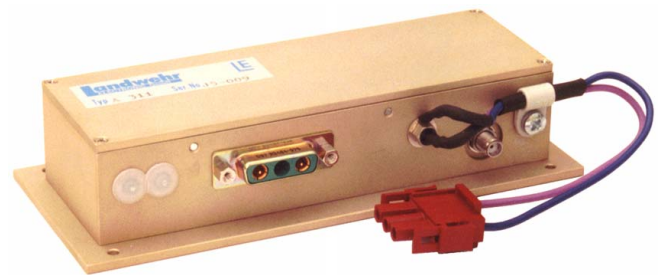


AOM Driver

A 311

With the A 311 Landwehr offers a SAW (surface acoustic wave) controlled oscillator driver for acousto-optic applications. The A 311 is one type of power driver of a completely new developed driver generation which allows analogue and digital modulation with a single 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, excellent switching and unique on/off ratio.



By providing two independent modulation techniques this driver can be used, for example, to replace the variable density filter wheel in a laser system as well as providing conventional digital modulation.

Technical Data

Sine wave oscillator frequency	250 MHz \pm 0.03%, SAW controlled
Frequency drift	$\Delta f / ^\circ\text{C} < \pm 50$ 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
Digital logic specification (TTL)	logic $\uparrow 1 \uparrow$ • or open input \Rightarrow rf power on logic $\downarrow 0 \downarrow$ \Rightarrow rf power off optional: inverse logic
RF on-/off-ratio digital	> 50 dB at any output level
RF switch-on/switch-off time	< 4 nsec @ P_{RF} : 10...90 %
RF output power level	$< +25 \dots > +31.5$ dBm @ 50 Ω , amplifier is protected against load mismatch

Analogue video control input	standard: 0 ... +5 volt into 600 Ω optional: 0 ... +1 volt into 50 Ω
Analogue voltage = 0 V or open input Analogue voltage = 5 V (1 V)	rf power output ⇒ off maximum rf power output ⇒ on
RF on-/off-ratio analogue RF on-/off-ratio analogue	> 30 dB at any output level @ 600 Ω > 40 dB at any output level @ 50 Ω
Modulation bandwidth	dc ... 2 MHz @ 600 Ω
RF output stability	warm-up time (10 min) <± 5 % after warm-up time <± 1 %
Supply voltage	$U_S = 24 \text{ V} \pm 0.5 \text{ V}$
Supply current	$I_S = 510 \text{ mA} \pm 50 \text{ mA}$

Connectors and Mechanics

RF-Connector	SMA female
3 pin cable connector for power supply voltage • AMP MATE-N-LOCK	Pin 1 +24 V violet Pin 3 GND 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 °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