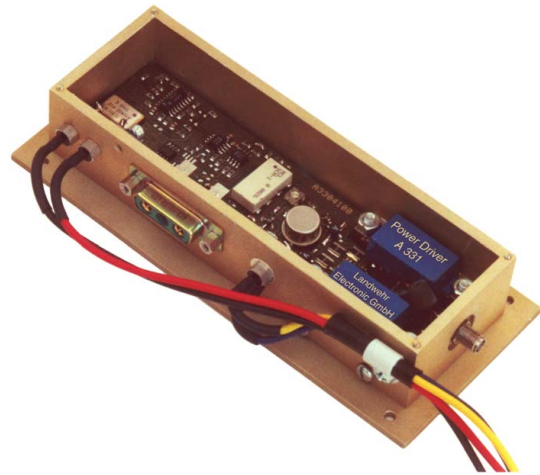


Power RF-Driver

A 331

With the A 331, Landwehr offers a SAW (surface acoustic wave) controlled oscillator driver for AOM (acousto-optic modulator) applications. The A 331 is one type of power driver of a completely new developed driver generation which allows e.g. dc-controlled power output or analogue modulation and digital modulation with a single AOM device. The oscillator frequency is twice the output frequency. Additionally the dc-ground is separated between the digital part and the radio frequency output stage to minimize unwanted radio frequency radiation.



The high technical performance guarantees a wide modulation bandwidth, excellent switching and a unique on/off ratio. If the specification listed below does not entirely meet your requirements please contact one of our engineers. We manufacture rf-drivers for specific applications and we would be pleased to design one that fully meets your needs.

Technical Data

Oscillator frequency	400 MHz \pm 0.03%, SAW controlled
Frequency drift	$\Delta f / ^\circ\text{C} < \pm 50$ ppm
Output frequency of driver	$f_0 = 200$ MHz
Spectral purity	< -60 dBc @ $f_0 \pm 90$ MHz < -40 dBc @ $f_0 \pm 180$ MHz
Harmonics	< -18 dBc @ $2f_0, 3f_0$
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 output power level	< +29 ... > +36.3 dBm @ 50 Ω - $U_S = 24$ V < +30 ... > +37.5 dBm @ 50 Ω - $U_S = 28$ V amplifier is protected against load mismatch

RF on-/off-ratio digital	> 55 dB at any output level
RF switch-on/switch-off time	< 8 nsec @ P _{RF} : 10...90 %
Analogue video control input	standard: 0 ... +1 volt into 50 Ω
Analogue voltage = 0 V or open input	rf power output ⇒ off
Analogue voltage = 1 V	maximum rf power output ⇒ on
RF on-/off-ratio analogue	> 30 dB at any output level
RF output stability	after warm-up time (10 min) <± 1 %
Supply voltage output stage	U _S = 24 V or 28 V ± 0.5 V
Supply voltage digital stage	U _D = 8 V ± 0.5 V
Supply current output stage	I _S = 950 mA ± 100 mA @ U _S = 24 V
Supply current output stage	I _S = 1150 mA ± 150 mA @ U _S = 28 V
Supply current digital stage	I _D = 180 mA ± 25 mA

Connectors and Mechanics

RF-Connector	SMA female
2 pin cable connector for supply voltage output stage • AMP MATE-N-LOCK	Pin 1 GND blue Pin 2 +24 V or +28 V yellow
3 pin cable connector for supply voltage digital stage • AMP MATE-N-LOCK	Pin 1 +8 V red Pin 3 GND black
Logic control connector	Cannon • D-Sub 3w3 female
Housing	150 mm x 50 mm x 33 mm
Mounting plate	165 mm x 70 mm x 3 mm

Absolute Maximum Ratings

Analogue video control input	-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
Burn-in test	passive 2 h active ½ h