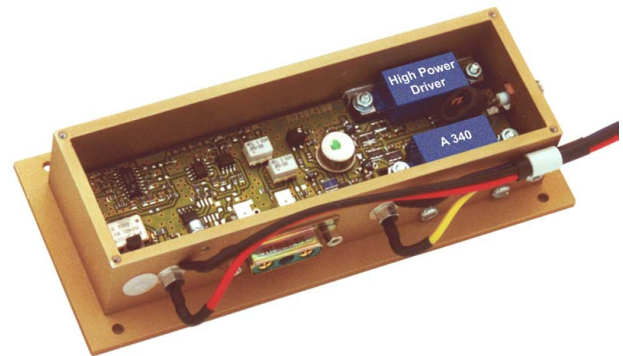


Power RF-Driver

A 340

With the A 340, Landwehr Electronic presents a Surface Acoustic Wave (SAW) controlled oscillator driver for Acousto-Optic Modulator (AOM) applications. The A 340 belongs to a double power driver generation allowing a very high dynamic range of analogue and digital modulation. The master oscillator runs at twice the output frequency. This high power rf-driver is well suited for use with fused silica aom-devices in order to modulate a 10 watt laser beam down to an intensity $<1 \mu\text{watt}$ in the first order diffraction stage.



The high technical performance of the driver guarantees an excellent rise and fall time, a wide modulation bandwidth and by using both - the analogue and the digital off state - you will achieve more than 80 db of suppression. 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	360 MHz \pm 0.03 %, SAW controlled
Frequency drift	$\Delta f / ^\circ\text{C} < \pm 50 \text{ ppm}$
Driver output frequency	$f_0 = 180 \text{ MHz}$
Spectral purity	$< -60 \text{ dBc}$ @ $f_0 \pm 75 \text{ MHz}$ $< -40 \text{ dBc}$ @ $f_0 \pm 150 \text{ MHz}$
Harmonics	$< -18 \text{ dBc}$ @ $2f_0, 3 f_0$
Digital logic specification (TTL)	logic $\uparrow\uparrow$ • or open input \Rightarrow rf power on logic $\downarrow\downarrow$ \Rightarrow rf power off optional: inverse logic
RF output power level	$< +29 \dots > +36.3 \text{ dBm}$ @ $50 \Omega - U_s = 24 \text{ V}$ $< +30 \dots > +37.5 \text{ dBm}$ @ $50 \Omega - U_s = 28 \text{ V}$ amplifier is protected against load mismatch

RF on-/off-ratio digital	> 70 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	> 70 dB at any output level
RF output stability	after warm-up time (10 min) <± 1 %
Output stage supply voltage	U _S = 24 V or 28 V ± 0.5 V
Digital stage supply voltage	U _D = 8 V ± 0.5 V
Output stage supply current	I _S = 950 mA ± 100 mA @ U _S = 24 V
Output stage supply current	I _S = 1150 mA ± 150 mA @ U _S = 28 V
Digital stage supply current	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