



YIG drivers accept a voltage input or a binary word and output a stable, low-noise current for driving the tuning coil of typical YIG tuned devices. Units can be customized to suit particular requirements and specifications. Internal linearizers, sense resistors, and high speed FM or dithering outputs are available.

Package shown is .325 by .625, .125 thick 22 leads

The Impellimax YD series of YIG coil drivers covers a wide range of YIG requirements. The repertoire of available options that we have designed virtually guarantees that every requirement can be satisfied with a well-suited driver.

Binary input units are available, with 8 and 12 bit TTL logic as standard tuning resolutions. Both serial and parallel binary word format can be accommodated.

Lower-current units in standard hybrid packages (typically under 200 mA) can have internal power components. For higher current applications, units are available for use with external pass transistors, as shown in the image above. Alternatively, to keep integration simple, high current YIG drivers can be designed as an all-in-one high-power device. We make use of copper packages and BeO substrates in our high-current 40 Volt unit.

Some units have been made with internal thermal shutdown sensors to protect the device and load under incorrect thermal conditions, such as a shorted sense resistor, or the absence of a proper heatsink interface. Reverse EMF protection is included in most units, and BIT test outputs are available.

Settling time for a half-band step of a medium current device is typically in the range of 50 to 500 Usec. High-compliance output structures are used for best speed performance in driving the inductive load. Secondary outputs can be added on, specifically designed for highest-speed operation when driving low-current dithering coils (also called FM coils). Prototype testing at Impellimax can provide design assurance without incurring a cost to your organization.

YIG drivers can also have up to 9 breakpoints available for setting the linearity of the tuning transfer function. Either external or internal resistors can be used.

The device shown above is housed in a .375 by .625 inch flatpack, which is .125 thick. It is a 22-lead device, and gull-wing leadforming is available as a no-charge option. It incorporates a D/A converter, a four-breakpoint linearizer, and a current-source output. It is rated for operation from -55°C to $+125^{\circ}\text{C}$.

Contact the factory for details regarding your specific YIG driver needs.

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