



DEM L2360PA, L2360PAS, L2360PATV, L2360PATVS

Description:

The L2360PA series of 60 watt 23/24 CM power amplifiers is a new design utilizing a combined pair of Mitsubishi MosFET power modules. Along with the amplifiers new physical design, there are new features and options that surpass previous amplifier designs of this frequency range. This design includes options full transceive operation, an LNA module, remote power sensing, and an option to purchase the amplifier without the Heat Sink and Fan for easier installation in a tower top environment. It is shipped with an assembled DC power and control cable included and will be configured with any of the standard options listed below. Please review the specifications and options but understand that some "custom" options and configurations may be enabled to satisfy you requirements. Just ask!



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Model Number and Frequency Range:	L2360PA, L2360PAS L2360PATV, L2360PATVS 1270 - 1300 MHz. 1240 - 1270 MHz. The PAS and the PATVS are the Transceiver Option
Power Output :	50 Watts linear minimum, 60W + Saturated
Input Drive Level maximums:	200 mw 1 watt 3 watt 10 watt
DC Power Requirement:	13.8 VDC @ 20 amps.
Connectors:	N Female, SMA Female , BNC on input only
Options:	LNA RF Sense Mast Mount
Standard Dimensions:	6.3" W x 5.3" L x 3.2" H with connectors and Fan
Mast Mount Version:	6.0" W x 5.3" L x 0.9" H with connectors



Review of Specifications and Options:

Frequency Range: Although the amplifier will operate at all frequencies between 1240 and 1300 MHz, we optimized each amplifier to meet the output power specifications in the 30 MHz bandwidth section selected. The L2360PA and PAS is optimized for the 1270-1300 weak signal portion of the band and the L2360PATV is optimized for the ATV and lower FM mode (1240-1270 MHz) portion of the band. Either optimization may be used for the Satellite band of 1268-1269 MHz.



Power Output and Input Drive Levels: The Linear output power is optimized for a minimum level for the required input drive level. Head room is allowed to enable full linearity of the amplifier and a higher compressed output power. If FM mode operation is the only requirement, the amplifier will be optimized for a compressed output power.

Connectors: Standard type N, SMA and BNC connectors are utilized and mixed types may be ordered to eliminate the use of adapters but BNC type connectors cannot be utilized on the output of the amplifier.

Standard Features Included:

RF Power Monitor: A standard reference voltage output is provided to monitor the output power of the amplifier. It is user calibrated and can be connected to any LED display circuit or voltmeter. It may also be utilized to verify the linear function of the amplifier when in actual use.

DC Power Monitor: A sampled voltage on receive is available to determine if the DC voltage is correct to the amplifier. This RX ON voltage may be utilized for all receive functions in your system such as for a LNA. It can be connected to a "Ready" light or can be inverted to control a transmit function or indicator if the amplifier is remotely mounted.

Variable Speed Cooling Fan: A variable speed cooling fan is controlled by the actual heat sink temperature.



Options:

LNA: An internal LNA with a filtered output that is switched in/out of line during Transmit/Receive and may be bypassed with connections through the DC connector. This LNA may also be connected to any sequencer and operated separately in timing of the transmit/receive function of the power amplifier. **NOTE:** The LNA option is only offered in the L2360PAS version, 1270-1300 MHz.

RF SENSE: This option can only be provided for FM or ATV operation in the L2360PAS and L2360PATVS versions. The RF sense circuit activates the T/R function of the amplifier and can be utilized with the LNA option in the L2360PAS version.

TR BIAS: Applying a DC voltage on the Input coax actuates the PTT circuit. This is useful in mast mount or remote applications.

MAST MOUNT: This option is any version of amplifier without the Heat Sink and cooling fan. As provided, it is intended to be mounted in a separate metal enclosure that may be mast mounted or in a remote enclosed environment providing conduction cooling. The L2360PA will dissipate up to 200 watts of heat and if cooling is not adequate,



damage may occur. If this option is ordered there will be an additional Installation document provided and will contain a template to aid attachment to any type of conduction cooling device. There are 8 attachment holes within the L2360 enclosure and are tapped to 4-40 size. Further clearing or adjustment may be required to ensure that the amplifier enclosure fits flush with the assembly it is attached to.

Mast Mount Option Ordering Recommendations: If your transceiver side cable length has more than 3dB of loss, the LNA option should be ordered. You may extend any of the control cables to your required length and it would be most important to understand their functions and importance with a remote mounted amplifier. The ability to toggle the LNA on and off to verify receive performance and having the RX ON voltage to ensure that the DC voltage to the amplifier is correct. The RF Monitor will verify that the amplifier is operating and varying the RF drive level will ensure the linearity of the amplifier if required. Then, if for whatever reason you decide to utilize the amplifier back in the shack or in your mobile as additional power for a rover, the Heat Sink and Fan kit can be ordered and installed by any user.