



DEM Part Number 3-3PA
10GHz Linear Amplifier

Specifications

Frequency range:	10.0 - 10.5 GHz.
Power Out:	3Watts nominal 3.2W Saturated
Power Input for rated power out:	10 mW for linear operation
Return Loss	>10dB@ 10.368 GHz
DC requirements:	13.8 volts DC@ 2.2 amps. for nominal output 16 volts DC absolute maximum 10Volts Minimum
Connectors:	SMA(F) only
Size:	2" L x 4" W x 2" H Standard 1.5" L x 4.1" W x 2" H Optional
Active devices:	FM5061VF (Eudyna)
Keying Option:	PTT - H (1.5-15Volts for transmit) PTT - L (Ground for transmit)

The Down East Microwave Inc. 3-3PA linear amplifier is a simple gain block for the amateur 3 cm band. It will provide >3 Watts saturated output power with 10mW of drive. It requires external T/R switching and can be used by itself or as a driver for a higher power amplifier. The amplifier requires a single 13.8 volts DC supply at 2.2 amps, but will operate at reduce ratings down to 10 volts and up to 16 volts. The unit is provided with an internal negative bias supply and keying circuit for ease of use.

To achieve maximum performance the amplifier should be mounted in a well ventilated area with heat sink fins in the vertical position for optimum cooling, or bolted to a heat sink if the optional unit is ordered. It is advisable but not necessary to use circulators and band pass filters when available. This will prevent stray oscillations and needless waste of power by amplifying local oscillator frequencies or generating high power out of band spurious signals.

This amplifier is a perfect match for our 10368-144 transverters. Optional TR switching to key the amplifier directly with the transverter is available. Please contact DEMI with any question and for transverter/amplifier package deals.



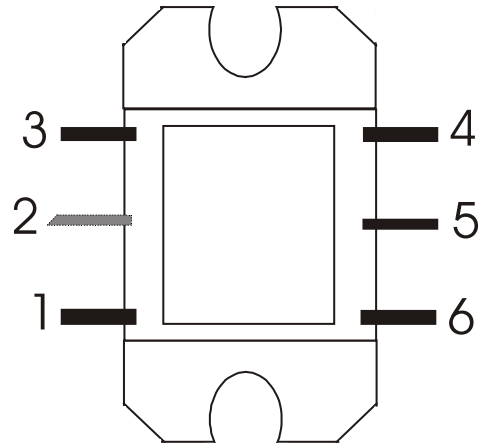
3-3PA Component List

All resistors and capacitors are chip components unless specified.

C1 1.0 μ F	C12 2.2 μ F can	VR1 78M05
C2 1000 ρ F	C13 0.1 μ F	Q2 2N2222
C3 0.1 μ F	C14 10.0 μ F	D1 1N4000
C4 2.2 μ F can	C15 10.0 μ F	D2 1N914 or 1N4148
C5 2.2 μ F can	C16 1000 ρ F	D3 CZ5348B
C6 100 μ F can	C17 10.0 μ F	K1 G5V-5
C7 0.1 μ F	R2 200 POT	IC1 NMA0505S
C8 0.1 μ F	R3 5.1K Ω	IC2 FMM5061VF
C9 0.1 μ F	R4 5.1K Ω	PCB board
C10 1000 ρ F	R6 51 Ω	
C11 1.0 ρ F	R7 3 Ω 10 watt	

Pin Out:

1	VGG
2	RF in
3:	N.C.
4:	VDD
5:	RF Output
6:	VDD



3-3PA SCHEMATIC

