

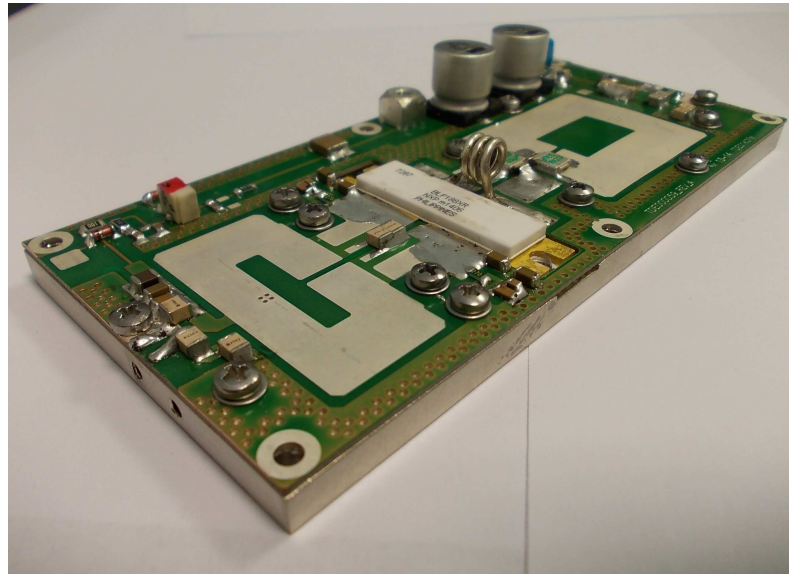
# TDE01k0FM

Power Amplifier Section 1000W FM

## Charateristics

- 87.5 – 108 MHz
- Pout nom: 1000W CW
- Pout max: 1100W CW
- low pass filter embedded
- Gain: 23dB
- 50 Ohm in/out Impedance
- Classe B Operation
- Device: NXP BLF188 XR
- Dimension: (LxWxH)  
135Xx60x30mm  
Filter dimension 56mm

RoHS  
Compliant



TDE01k0FM without low pass filter

## Applications

- FM application
- CW application
- PULSED application

**Using new RF power transistor based on 6<sup>th</sup> generation LDMOS technology, this amplifier module combines excellent ruggedness with a high power gain, high RF power and maximum efficiency. This amplifier can be equipped with its low pass filter, to ensure harmonics level that exceed ETSI requirements**

### Absolute Maximum Ratings

Parameter	Min.	Typ.	Max.	Units.	Note
Voltage Supply			55	V DC	
Supply Current			35	A DC	
Flange Operating temperature range			+120	°C	
Storage temperature range	-20		+150	°C	

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### Electrical Specification

Parameter	Min.	Typ.	Max.	Units.	Note
Frequency Range	87.5		108	MHz	
Voltage Supply	46		50	Volts	Pout 1000W CW
Power Gain		23		dB	Power In 5W
Input Power			10	W	
Quiescent Current		300		mA	Vcc: 48V
Drain Efficiency	75	80		%	Pout 1000W CW with filter
Power Output		1000	1100	W	See note 1
Input VSWR		<1.5:1			
Load VSWR			25:1		1 sec max
Load VSWR			2:1		Continuous work

### Typical Performance

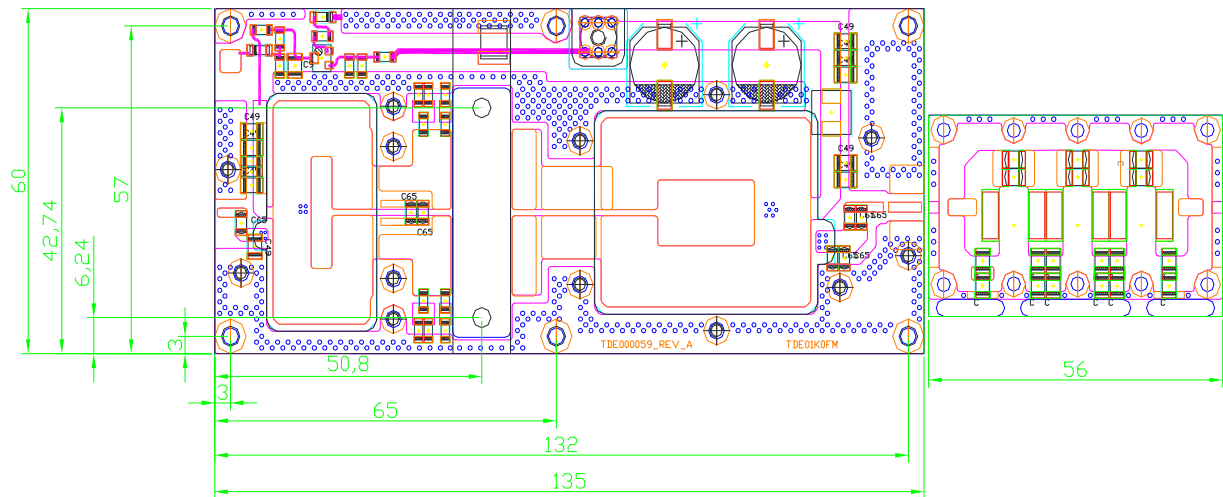
Measured on 50 Ohm load with low pass filter

Test Frequency (Mhz)	Power Out W)	Drain voltage (V)	Ids (A)	Efficiency %	Harmonics products (dBc)
87,5	1000	49	25,2	81	<-80
92	1000	49	25	80	<-80
98	1000	50	25.3	79,5	<-80
102	1000	50	25	80	<-80
108	1000	49.5	25	80.8	<-80

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### Mechanical Specifications



### Screws Type

Screws point 1 to 6 M3x12 Socket head cap screws + 6 split lock washers.  
Screws point 7-8 M3x 30 Socket head cap screws + 2 split lock washers

### Recommendend Torque

The recommended Torque is: 2 N/m for Devices Fixing (2 places) and 1 N/m for other screws.

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## Thermal Compound

Recommended Dow Corning 340 ( heat sink compound ) or equivalent

## Application Note

### Note 1 (thermal exchanger requirements)

Max operative temperature is measured very closed to the device flange. Max temperature value is referred to the nominal operative condition, please foresee an adequate heatsink.

### Note 2 (Load matching)

This amplifier can work without power reduction on a 2:1 VSWR load matching with FM Signal. Load mismatch higher than 2:1 can improve the temperature of RF device and filter, a suitable protection system must be used.

### Note 3 (shielding)

Due to the High gain of this pallet, a good shielding between final stage and any driver/low power stage is required. Please foresee a good RF choke also on the supply wiring.

## Important Note

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## Ordering Information

Product Name (standard Version)	TDE01k0FM
Product Name (with LPfilter)	TDE01k0FM/LPF

### TDE

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