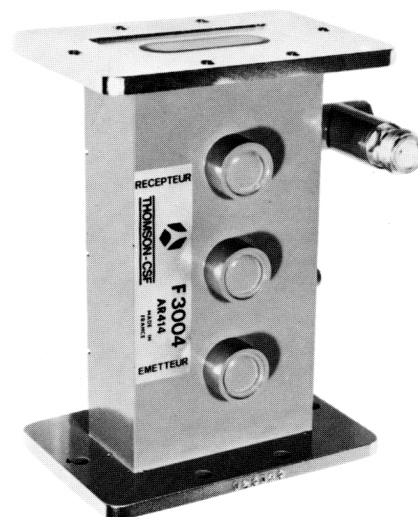




## F 3004/AR 414 TR TUBE

The F 3004 is a broad band, fixed tuned TR tube, operating over the 2.9 to 3.23 GHz frequency range, at a maximum power level of 30 kW. It is designed for use after a Pre-TR as for instance the F 3003/AP 413. The gas discharge is induced by a keep alive electrode : the ignitor.

The F 3004 features an exceptionnaly rugged construction, insuring high reliability and stable operation under the most severe environmental conditions. With regards to these characteristics, the F 3004 finds applications in military equipments.



### CENERAL CHARACTERISTICS

#### Mechanical

Operating position .....	any. Mounting direction indicated on the tube
Dimensions .....	see drawing
Weight, approximate .....	1.1 kg

#### Electrical

RF peak power max. ....	30	kW
Ignitor current .....	50	$\mu$ A
Ignitor pulse voltage, peak .....	600	V
Duty cycle .....	0.001	

### ABSOLUTE RATINGS (non simultaneous)

	min.	max.	
Frequency .....	2900	3230	MHz
VSWR .....	—	1.4 : 1	
Ignitor voltage drop .....	200	500	V
Ignitor current :			
- average .....	—	0.2	mA
- peak .....	—	3.0	mA
Ignitor interaction for a 100 $\mu$ A current .....	—	0.3	dB
Recovery time at 3 dB .....	—	40	$\mu$ s
Spike leakage energy .....	—	0.2	erg
Flat leakage power, average .....	—	20	$\mu$ W
Insertion loss .....	—	0.7	dB

### OPERATING INSTRUCTIONS

The F 3004 TR tube consists of two identical flanges joined together by a  $\lambda$  7 waveguide. Each flange is provided with six fixing holes, tapped holes on thr receiver side and smooth holes on the transmitter side, in order to avoid mistake in mounting.

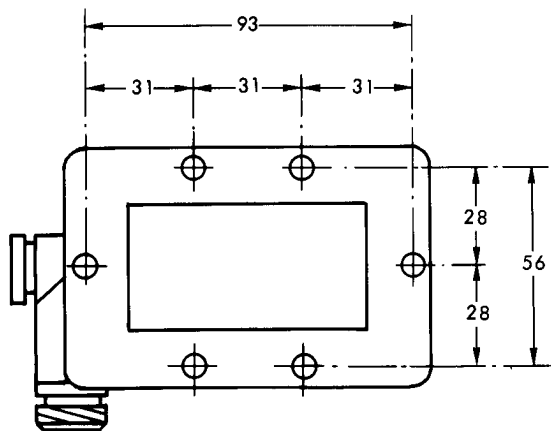
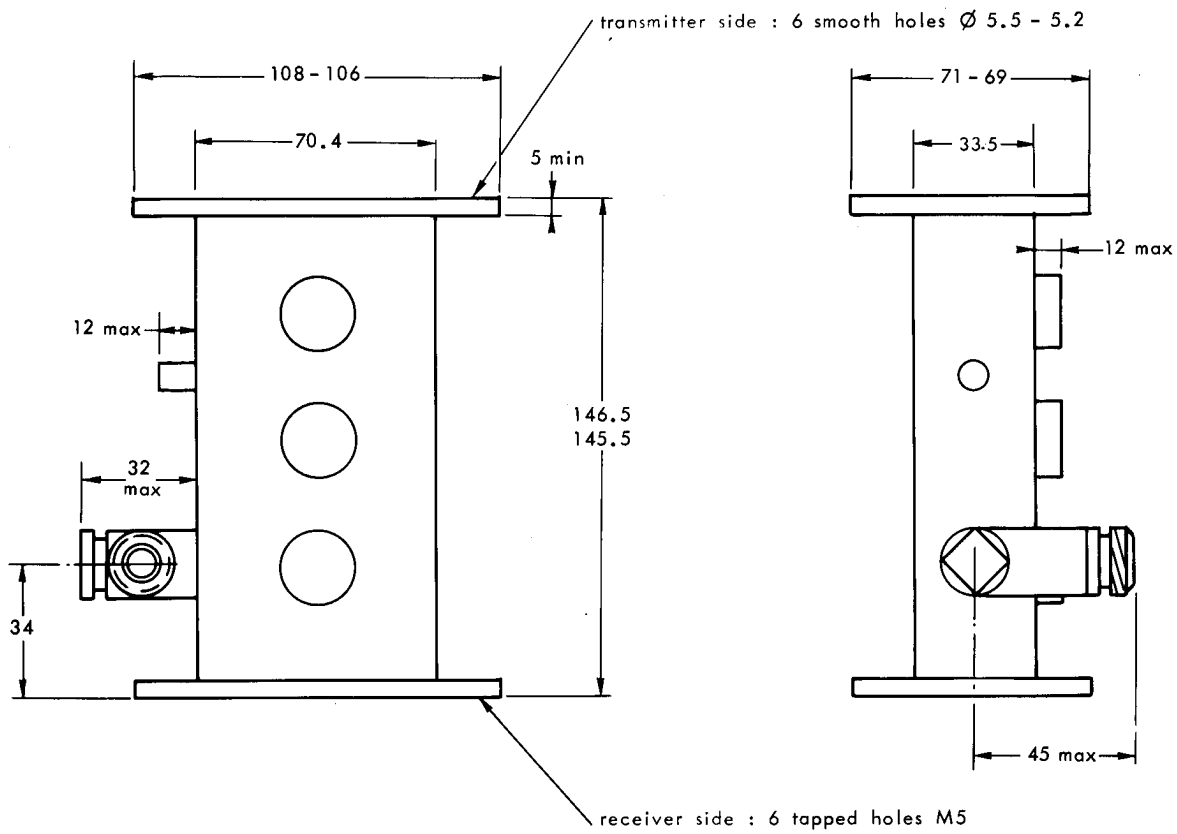
The flanges are equipped with low-surge coupling windows. Three pre-tuned spark gaps are included in the waveguide to allow wide band operation. One of the spark gaps is connected to a keep alive electrode, the output of which is a N-type coaxial plug.

The gas included in the tube body is a low pressure mixture of argon and water vapor.

The F 3004 mates with every standard  $\lambda$  7 waveguide fitted with the small type standard flange.



### OUTLINE DRAWING



Dimensions in mm.

