

# ET 2980

## KU BAND PULSED TWT

The ET 2980 is a coupled cavities, two collector stages TWT, pulsed amplifier with non intercepting grid and PPM focusing.

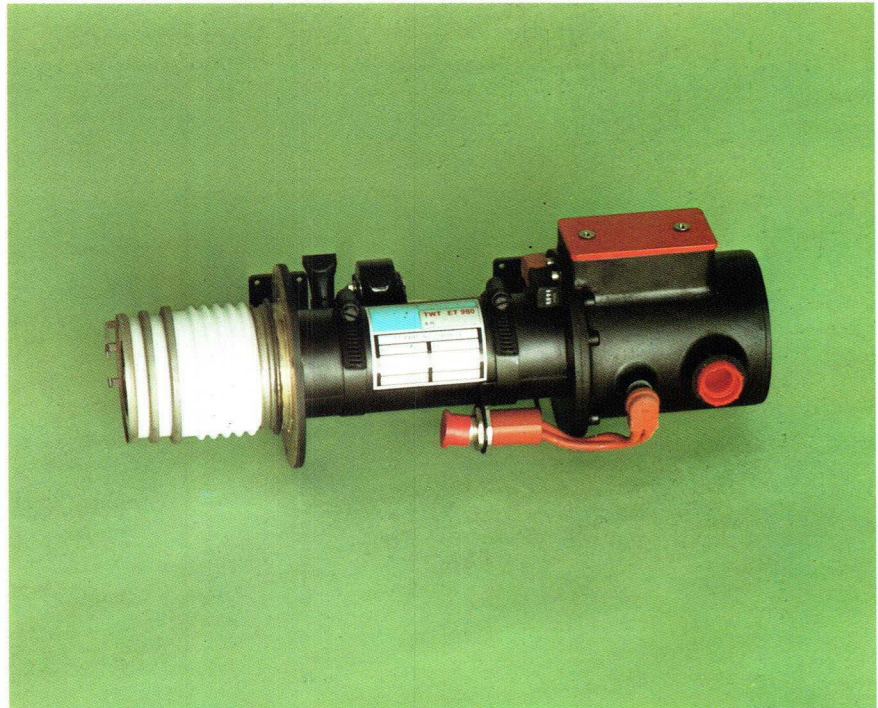
It is capable of providing a minimum of 12 kw peak power output over the frequency range of 16.5 to 17 GHz.

The ET 2980 is cooled by forced liquid, the same attaining the purpose of insulating the cathode, central grid, collectors voltage inputs.

This tube, featuring high gain and high efficiency, has been specifically designed to achieve optimized performance in pulsed radar application.

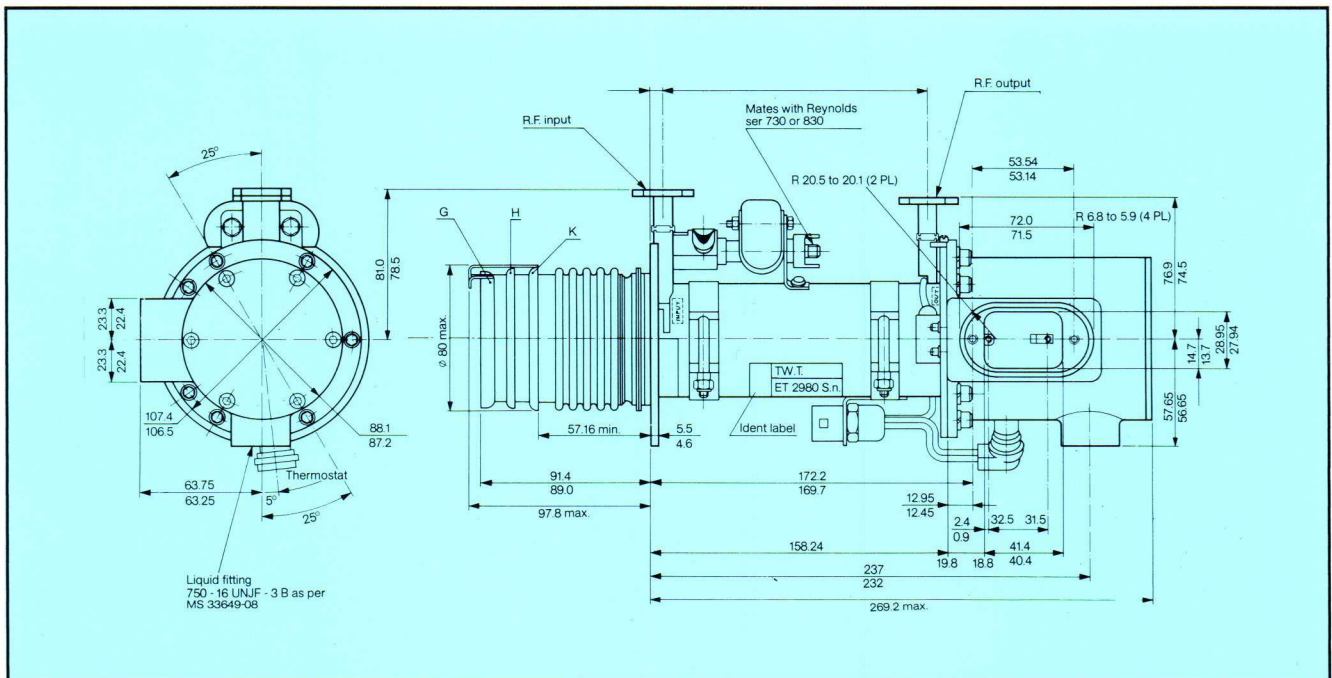
These technical data should be used as a guide for equipment designers.

For any operating condition other than those recommended in this data sheet, the manufacturer should be consulted.



(Dimensions in mm)

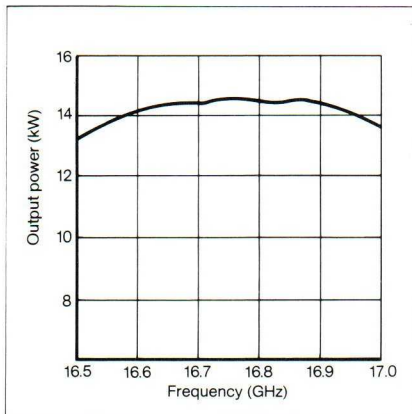
▲ KU BAND PULSED TWT ET 2980



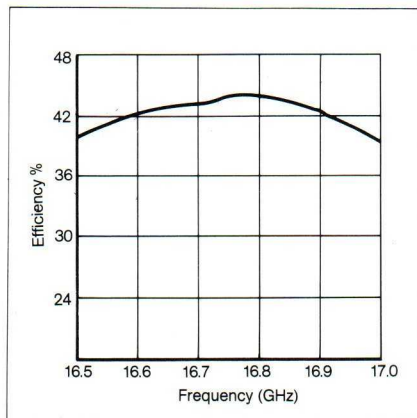
## Mechanical data

Weight	5 kg
Coolant type	DC-200-10 or equivalent
Coolant flow rate (Min.)	8.2 l/min
Coolant pressure drop	0.35 kg/cm <sup>2</sup>
Dimensions	see the outline drawing
R.F. flanges	UG/419

### Typical performance curves



Saturated output power



Overall efficiency

## Electrical data

Absolute ratings	Min.	Max.	Unit
Duty		2.5%	
Heater surge current		7	A
Heater operating current		4	A
Heater voltage (dc or ac)		10	V
Warm-up time	3		min
Cathode voltage	-28	-30.5	kV
Cathode current		2.1	A
Collector voltage n. 1 (respect to the cathode)	+15	+20	kV
Collector current n. 1 (with R.F.)		0.7	A
Collector Voltage n. 2 (respect to the cathode)	+11	+16	kV
Collector current n. 2 (with R.F.)		2.1	A
Grid bias voltage (respect to the cathode)	-360	-600	V
Grid drive voltage (respect to the cathode)	+250	+350	V
Grid current		25	mA
Ion pump voltage	3	3.6	kV
Ion pump current		1	mA
Body voltage		ground	
Body current (with R.F.)		0.32	A
Coolant temperature	-54	+90	°C
Temperature	-54	+100	°C

### Typical operations

Output power	13.5	kW
Saturated gain	48	dB
Overall efficiency	40%	
Heater voltage (nameplate) dc or ac	9	V
Heater current	3.5	A
Cathode voltage (nameplate)	-29.5	kV
Cathode current (nameplate)	2	A
Body voltage	ground	
Body current (with R.F.)	0.25	A
Collector voltage n 1 (respect to the cathode)	+17	kV
Collector current n. 1 (with R.F.)	0.25	A
Collector voltage n. 2 (respect to the cathode)	+14	kV
Collector current n. 2 (with R.F.)	1.5	A
Grid drive voltage (respect to the cathode) (nameplate)	+300	V
Grid bias voltage (respect to the cathode)	-400	V
Grid current	5	mA
Ion pump voltage	3	kV
Ion pump current	<3	μA