

# TWAL

## 2 ... 4 GHz

## Travelling Wave Tube

### Standard Models

| Model          | Frequency Range | Output Power<br>$P_N$ / W | Gain<br>min / typ<br>dB | Harmonics<br>2nd / 3rd<br>dBc | Line Power<br>W | Dimensions<br>(H,D)<br>19"-System | Weight<br>kg |
|----------------|-----------------|---------------------------|-------------------------|-------------------------------|-----------------|-----------------------------------|--------------|
| TWAL 0204-250E | 2 ... 4 GHz     | 250                       | 54 / 62 $\pm$ 7.5       | 6 / 15                        | 3000            | 4 HU, 700 mm                      | 32           |

### Standard Specifications:

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| Input Power           | 0 dBm (1 mW) max.                                     |
| Overdrive Protection: | up to +10 dBm for no damage                           |
| Input Impedance:      | 50 Ohm nominal                                        |
| Output Impedance:     | 50 Ohm nominal                                        |
| Input VSWR:           | <2:1 typ.                                             |
| Load VSWR:            | 2:1 max. for $P_N$ -0.5 dB;<br>infinite for no damage |
| Spurious (at $P_N$ ): | -50 dBc typ.(excluding harmonics)                     |
| Noise:                | 1 ... 18 GHz: 20 dBm/MHz<br>18 ... 40 GHz: 7 dBm/MHz  |
| Class of Operation:   | A-linear                                              |

### General:

|              |                                                                                         |
|--------------|-----------------------------------------------------------------------------------------|
| RF Input:    | 1 ... 18 GHz: N-f; standard on rear panel<br>18 ... 40 GHz, k-f; standard on rear panel |
| RF Output:   | 1 ... 8 GHz: N-f<br>8 ... 18 GHz: WRD 750<br>18 ... 40 GHz WRD 180                      |
| Sample Port: | -50 dB forward                                                                          |

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|                      |                                                                    |
|----------------------|--------------------------------------------------------------------|
| Mains Supply:        | 100 ... 240 V AC / 47 ... 63 Hz                                    |
| Ambient Temperature: | 0 ... +45°C                                                        |
| Storage Temperature: | -20 ... +85 °C                                                     |
| Relative Humidity:   | up to 95% (non-condensing)                                         |
| Operating Altitude:  | up to 2000 m above sea level                                       |
| Vibration and Shock: | normal laboratory environment                                      |
| Cooling:             | forced air with integral blower,<br>air intake and exhaust at rear |

**Options:**

|                                      |                           |
|--------------------------------------|---------------------------|
| A) RF Monitor Outputs                | F) Gain Adjustment        |
| B) External Dual Directional Coupler | G) Output Isolator        |
| C) IEEE-488.2 GPIB Remote Control    | N) Harmonic Filter        |
| D) Front Panel RF Connectors         | R) RS-232C Remote Control |
| E) Power Indication                  | U) USB Remote Control     |

Specifications are subject to change without notice

