

Appendix A: Specifications

This appendix describes the electrical, mechanical, and environmental specifications of the Tektronix 2706 RF Preselector.

Electrical Specifications

A-1 Range: 9 kHz to 1800 MHz
 Insertion loss (max): 2.0 dB

Filters Frequency Range: 9 kHz to 1800 MHz
 Bandpass/high-pass flatness: 1.5 dB max

Table A-1: Preselector Band Related Specifications

Band	Bandpass	Nominal loss	-6.0 dB bandpass (typical)	-40 dB bandpass (typical)
1	9 kHz – 150 kHz	2.0 dB max	6.2 kHz – 220 kHz	3.2 kHz – 440 kHz
2	150 kHz – 3.0 MHz	2.0 dB max	90 kHz – 4.5 MHz	50 kHz – 9.0 MHz
3	3 MHz – 30 MHz	2.0 dB max	2.5 MHz – 35 MHz	1.6 MHz – 45 MHz
4	30 MHz – 125 MHz	2.0 dB max	23 MHz – 145 MHz	12 MHz – 260 MHz
5	125 MHz – 250 MHz	1.5 dB \pm 1.0 dB	110 MHz – 280 MHz	100 MHz – 340 MHz
6	250 MHz – 500 MHz	2.0 dB \pm 1.0 dB	225 MHz – 600 MHz	150 MHz – 950 MHz
7	500 MHz – 1000 MHz	2.0 dB \pm 1.0 dB	400 MHz – 1190 MHz	225 MHz – 1400 MHz
8	1000 MHz – 1800 MHz	4.0 dB \pm 1.0 dB	775 MHz	350 MHz

RF input/output connectors: Type N
 Input/output impedance: 50 Ω nominal
 VSWR (max): 1.8:1
 Ultimate rejection, stop band: 60 dB typical
 40 dB min <500 MHz
 30 dB min >500 MHz
 Maximum input: +20 dBm, 50 VDC
 Switching speed (max): 10 ms

GPIB interface:	Meets IEEE Std. 488.2-1987
GPIB interface supports:	AH1, L4, SH1, T6, SR1, PP1, DC1, DT0, RL1, C0, E1, TE0, and LE0
Input Voltage:	90/250 VAC, 48 – 63 Hz, 10 W

Mechanical Specifications

Dimensions (H x W x D):	88 mm x 327 mm x 431 mm (3.46 in x 12.87 in x 16.97 in)
Weight:	5.9 kg (13 lbs)

Environmental Specifications

Temperature, operating:	0°C to 50°C (32°F to 122°F)
Temperature, storage:	-40°C to 75°C (-40°F to 167°F)
Humidity, storage:	Five cycles (120 hrs) per MIL-T-28800C, Class 5
Vibration:	Meets MIL-T-28800C Method 514 Procedure (modified)
Shock, operating and storage:	Three guillotine-type shocks of 30 g, one-half sine, 11 ms duration each direction along each major axis; total of 18 shocks

Certifications and Compliances

Table A-2: Certifications and compliances

Category	Standards or description
EC Declaration of Conformity – EMC	<p>Meets intent of Directive 89/336/EEC for Electromagnetic Compatibility. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Union:</p> <p>EN 50081-1 Emissions: EN 55022 Class B Radiated and Conducted Emissions EN 60555-2 AC Power Line Harmonic Emissions</p> <p>EN 50082-1 Immunity: IEC 801-2 Electrostatic Discharge Immunity IEC 801-3 RF Electromagnetic Field Immunity IEC 801-4 Electrical Fast Transient/Burst Immunity</p> <p>High quality shielded cables must be used to ensure compliance to the above listed standards.</p>
FCC Compliance	Emissions comply with FCC Code of Federal Regulations 47, Part 15, Subpart B, Class A Limits.
Installation (Overvoltage) Category	<p>Terminals on this product may have different installation (overvoltage) category designations. The installation categories are:</p> <p>CAT III Distribution-level mains (usually permanently connected). Equipment at this level is typically in a fixed industrial location.</p> <p>CAT II Local-level mains (wall sockets). Equipment at this level includes appliances, portable tools, and similar products. Equipment is usually cord-connected.</p> <p>CAT I Secondary (signal level) or battery operated circuits of electronic equipment.</p>
Pollution Degree	<p>A measure of the contaminates that could occur in the environment around and within a product. Typically the internal environment inside a product is considered to be the same as the external. Products should be used only in the environment for which they are rated.</p> <p>Pollution Degree 1 No pollution or only dry, nonconductive pollution occurs. Products in this category are generally encapsulated, hermetically sealed, or located in clean rooms.</p> <p>Pollution Degree 2 Normally only dry, nonconductive pollution occurs. Occasionally a temporary conductivity that is caused by condensation must be expected. This location is a typical office/home environment. Temporary condensation occurs only when the product is out of service.</p> <p>Pollution Degree 3 Conductive pollution, or dry, nonconductive pollution that becomes conductive due to condensation. These are sheltered locations where neither temperature nor humidity is controlled. The area is protected from direct sunshine, rain, or direct wind.</p> <p>Pollution Degree 4 Pollution that generates persistent conductivity through conductive dust, rain, or snow. Typical outdoor locations.</p>

Appendix A: Specifications

Table A-2: Certifications and compliances (cont.)

Category	Standards or description
Safety Standards	
U.S. Nationally Recognized Testing Laboratory Listing	UL1244 Standard for electrical and electronic measuring and test equipment.
Canadian Certification	CAN/CSA C22.2 No. 231 CSA safety requirements for electrical and electronic measuring and test equipment.
European Union Compliance	Low Voltage Directive 73/23/EEC, amended by 93/69/EEC EN 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use.
Additional Compliance	IEC61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use.
Safety Certification Compliance	
Temperature, operating	+5 to +40° C
Altitude (maximum operating)	2000 meters
Equipment Type	Test and measuring
Safety Class	Class 1 (as defined in IEC 1010-1, Annex H) – grounded product
Overvoltage Category	Overvoltage Category II (as defined in IEC 1010-1, Annex J)
Pollution Degree	Pollution Degree 2 (as defined in IEC 1010-1). Note: Rated for indoor use only.