# SPECIFICATION

#### Introduction

The **Pulse Head** is an accessory to the **CG 551AP** Programmable Calibration Generator. It connects to the main output of the CG 551AP and is programmed and stimulated by signals from the CG 551AP. This accessory generates 1 V square waves with a well defined leading edge. This edge is used to verify and calibrate transient response in wide-band oscilloscopes.

### NOTE

The references to the CG 551AP in this manual apply equally to the CG 5001. The CG 5001 has a newly designed Power Module to plug-in GPIB interface connector. This allows it to be used in all TM 5000 Power Modules. The CG 551AP functional information also applies to the CG 5001.

#### Accessories

This instruction manual is the only standard accessory.

#### Performance Conditions

The electrical characteristics are valid only if the Pulse Head has been calibrated at a" ambient temperature between  $+20^{\circ}$  C and  $+30^{\circ}$  C and is operating at an ambient temperature between  $0^{\circ}$  C and  $+50^{\circ}$  C, unless otherwise noted.

Items listed in the Performance Requirements column of the Electrical Characteristics are verified by completing the Performance Check in the Calibration section of this manual.

Items listed in the Supplemental Information column are not verified in this manual.

Table i-1

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Characteristics	Performance Requirements	Supplemental Information
Fast Edge Pulse		
Amplitude	1.1 V peak. <b>±5%</b> .	Required Input Signals: V Control Pin = ±9.6 V, ± 1%.
Variable Range	±10%.	$V \operatorname{Coax} = \pm 5 V, \pm 1\%.$
Polarity	Positive <b>rising</b> from ground to +1 V or negative falling from ground <b>to</b> -1 V.	In the straight-through mode, the pulse will output any signal routed through the CG 551AP OUTPUT connector.
Risetime	≪200 ps.	Driving waveform $T_r < 10$ "s. Triggered on edge going to ground.
Leading Edge Aberrations	<ul> <li>±3% of pulse amplitude; not to exceed</li> <li>4%. p-p for adjacent peeks.</li> </ul>	Valid fiom to 50 ns.
Long Term Flatness		±1%, aft+ 50 ns.
Frequency	100 Hz to 100 kHz in decade steps.	
Source Resistance		50 Ω, ±2%.
Control Pin Signals		
Programming		±12 V, 150 mA maximum.
Operating		±10 V.60 mA maximum.

Characteristic	Performance Requirement	Supplemental Information	
Coax Signals			
Programming		±5 V, 30 mA maximum (dc).	
Operating		$\pm 5$ V, 30 mA maximum (square wave).	
Maximum Power Requirements			
Programming		<2 w.	
Operating _	a de la companya de la	<1 w.	
Straight-through mode		<0.05 W.	

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### Table 1-2

## ENVIRONMENTAL CHARACTERISTICS '

Characteristics		escription
Temperature		Meets MIL-T-28800B, class 5.
Operating	0°C to +50°C.	
Non operating	-55°C to +75°C.	
Humidity	90-95% RH for 5 days to 50°C.	Exceeds MIL-T-28800B, class 5.
Altitude	·	Exceeds MIL-T-28800B, class 3.
Operating	4.6 km (15.000 feet).	
Non operating	15 km (50,000 feet).	
Vibration	0.64 mm (0.0252") 10 Hz to 55 Hz. 75 minutes.	Meets or exceeds MIL-T-28800B, class 3.
Shock	50 g's (1/2 sine). 11 ms, 18 shocks.	Meats or exceeds MIL-T-28800B, class 3.
Bench Handling	45' or 4" equilibrium, whichever occurs first.	Meets MIL-T-266008. class 3.
EMI Compatibility		<del>_</del>
Conducted Emissions		Meets MIL-T-28800B, class 3 MIL-STD-
Conducted Susceptibility		461A when performed in accordance with MIL_STD-462 with touowing except
Radiated Emissions	1	tions: Radiated emissions, tested to
Radiated Susceptibility	I	30 <b>dB</b> above specification from dg to 700 MHz.
Electrical Discharge	20 <b>kV</b> maximum.	Charge applied to each protruding area of the product under test except the output terminals.
Transportation		
Vibration	25 mm (1") at 270 rpm for 1 hour.	Qualified under National Safe Transit Association <b>Preshipment Test</b> Procedures
Package Drop	10 drops from 91 cm (3 ft).	1A-B-1 and 1A-B-2.

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Table 1-2 (cont)

Characteristics	Description	
Cables		
Flex Life	10,000 cycles at 120" flex with 0.68 kg (1.5 lb) weight.	
Pull Test	15.86 kg (35 lbs) axial pull at 1 minute duration.	

# Table 1-3 PWYSICAL CHARACTERISTICS

Characteristics	Description
Finish	Light and dark gray painted metal.
Overall Dimensions	196.9 mm (7.75") Lx 53.4 mm (2.102") W x 34.3 mm (1.35") H.
Net Weight	0.27 kg (0.6 lb).

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