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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 85685A RF preselector is designed to operate with the Keysight 8566B

Agilent Keysight 85685A RF Preselector 20 Hz to 2 GHz The HP 85685A RF preselector adds tracking filters and preamplifiers to HP 8566B/8567A/8568B spectrum analyzers for EMI-receiver operation from 20 Hz to 2 GHz. OEM EMC catalog text lists two inputs (20 Hz to 50 MHz with LISN transient limiter, and 20 MHz to 2 GHz), a DC-to-18 GHz bypass mode, CISPR Publication 16 bandwidths and quasi-peak detection (with 85650A), and plus 30 dBm (1 W) average input class. Configuring 8566B/8568B as an EMI receiver for conducted and radiated measurements with overload protection. The HP 85685A RF preselector adds tracking filters and preamplifiers to HP 8566B/8567A/8568B spectrum analyzers for EMI-receiver operation from 20 Hz to 2 GHz. OEM EMC catalog text lists two inputs (20 Hz to 50 MHz with LISN transient limiter, and 20 MHz to 2 GHz), a DC-to-18 GHz bypass mode, CISPR Publication 16 bandwidths and quasi-peak detection (with 85650A), and plus 30 dBm (1 W) average input class. Configuring 8566B/8568B as an EMI receiver for conducted and radiated measurements with overload protection.



MODEL

**Agilent / Keysight
85685A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

85685A

LISTING

<https://aumictechlabs.com/products/85685a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 85685A RF preselector is a companion module for the 8566B and 8568B spectrum analyzers that enhances measurement sensitivity and dynamic range through integrated tracking filters and preamplifiers. It effectively filters out-of-band signals and mitigates image responses, enabling accurate signal analysis in complex RF environments. The unit has 20 dB nominal preamplifier gain and extends measurement range by 30 dB when analyzing signals in the presence of high-level interference. The 85685A is a discontinued product.

Technical Specifications

Frequency Coverage: Input 1: 20 Hz to 50 MHz Input 2: 20 MHz to 2 GHz Bypass Mode: DC to 18 GHz (nominal)

Performance: Preamplifier Gain: 20 dB (nominal) at 0 dB RFP attenuation RFP Attenuation: 0 to 50 dB in 10 dB steps (nominal) Stopband Attenuation: >40 dB (nominal) Filter Bandwidth (3 dB): Fixed: 20 MHz (nominal) for 500 MHz to 2000 MHz input Tracking: 1 MHz (nominal) for input <2 MHz; 10% of tuned frequency for 2 MHz to 55 MHz; 5% of tuned frequency for 55 MHz to 500 MHz

Input Power Handling: Average Power: +30 dBm (1 Watt) with ≥ 10 dB RFP attenuation Peak Power: 100 Watts peak (10 μ s pulse) with ≥ 10 dB RFP attenuation; 2,000 Watts peak (10 μ s pulse) with ≥ 20 dB RFP attenuation

Impulsive Signal Tolerance: Input 1 withstands LISN transients; Input 2 withstands CISPR calibration pulses

Amplitude Accuracy (with 8566B/8568B and 85650A QPA): ± 2.0 dB at 10 dB spectrum analyzer attenuation (+10° to +30°C, 0–20 dB RFP attenuation) ± 2.5 dB at 0 dB spectrum analyzer attenuation (+10° to +30°C, 0–20 dB RFP attenuation)

Standing Wave Ratio: <1.5:1 across all attenuation modes

Key Features Fully programmable remote operation via HP-IB (IEEE-488) Dual-input architecture optimized for low-frequency and microwave bands Bypass mode maintains DC to 18 GHz access when preselector filtering is not required DC voltage tolerance: 0 Volts

Physical & Electrical Dimensions: 133 mm H $\times$ 425 mm W $\times$ 508 mm D Weight: 19 kg (net) Power: 100/120/220/240 V RMS ($\pm 5\%$, -10%), 50–400 Hz, 35 VA (nominal)

Compatibility & Integration Designed for Keysight 8566B and 8568B spectrum analyzers. 8566B units with firmware $\geq 5.5.85$ are compatible without modification; earlier firmware requires 85685A Option 066. Compatible with 8566A across all firmware versions.

Features & description

From manufacturer datasheet

Built-in preamplifiers for sensitivity

LISN transient limiter on Input 1 Bypass DC to 18 GHz Seamless control from the spectrum-analyzer front panel Technical Specifications Instrument Type: RF preselector (EMI accessory) Series Family: HP 85685A / 85650A EMI receiver accessories Frequency Range: 20 Hz to 2 GHz Input 1: 20 Hz to 50 MHz with built-in transient limiter for LISN transients Input 2: 20 MHz to 2 GHz Bypass Mode: DC to 18 GHz Host Analyzers: 8566B, 8567A, 8568B Companion Quasi Peak: 85650A quasi-peak adapter Cispri Filters: CISPR Publication 16 bandwidths with 85650A Average Input Class: plus 30 dBm (1 W) average listed in EMC catalog accessory notes Function: tracking filters reduce out-of-band overload; preamps improve system sensitivity Cables: system interface cables supplied as standard accessories Documentation: HP EMC accessory catalog 85685A listing Form Factor: EMI preselector accessory Control: operated through the spectrum-analyzer controls Application: EMI receiver measurements Operating Environment: EMC laboratory ambient Power: AC mains operated accessory Related 11960A: 9 kHz-1000 MHz EMC preselector with 30 dB amplifier Verification: preamp gain and NF are on the 85685A specification sheet Notes On QP: quasi-peak detection requires 85650A

85685A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	RF preselector (EMI accessory)
Series Family	HP 85685A / 85650A EMI receiver accessories
Frequency Range	20 Hz to 2 GHz
Input	20 Hz to 50 MHz with built-in transient limiter for LISN transients
Bypass Mode	DC to 18 GHz
Host Analyzers	8566B, 8567A, 8568B
Companion Quasi Peak	85650A quasi-peak adapter
Cispr Filters	CISPR Publication 16 bandwidths with 85650A
Average Input Class	plus 30 dBm (1 W) average listed in EMC catalog accessory notes
Function	tracking filters reduce out-of-band overload; preamps improve system sensitivity
Cables	system interface cables supplied as standard accessories
Documentation	HP EMC accessory catalog 85685A listing
Form Factor	EMI preselector accessory
Control	operated through the spectrum-analyzer controls
Application	EMI receiver measurements
Operating Environment	EMC laboratory ambient
Power	AC mains operated accessory
Related 11960A	9 kHz-1000 MHz EMC preselector with 30 dB amplifier
Verification	preamp gain and NF are on the 85685A specification sheet

85685A Specifications

PARAMETER	VALUE
Agilent Keysight 85685A RF Preselector 20 Hz to 2 GHz	Overview
Applications	Configuring 8566B/8568B as an EMI receiver for conducted and radiated measurements with overload protection.
Key Features	Tracking preselection 20 Hz to 2 GHz
LISN transient limiter on Input 1	Bypass DC to 18 GHz
Technical Specifications	Instrument Type: RF preselector (EMI accessory)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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PARAMETER	VALUE
Instrument Type	RF preselector (EMI accessory)
Series Family	HP 85685A / 85650A EMI receiver accessories
Frequency Range	20 Hz to 2 GHz
Input 1	20 Hz to 50 MHz with built-in transient limiter for LISN transients
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Verification	preamp gain and NF are on the 85685A specification sheet
Notes On QP: quasi-peak detection requires 85650A	
Overload: preselection plus limiter on the LISN input	
Use With: 8566B/8568B EMI software 85876B class	
Notes	
20 Hz-2 GHz, dual inputs, DC-18 GHz bypass, LISN limiter, 8566B/8568B hosts, and CISPR 16/85650A pairing from HP EMC accessory catalog 85685A text. Preamplifier gain/NF numeric tables are on the 85685A specification sheet.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.