

Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as spectrum analyzers, signal generators, oscilloscopes, power meters, logic analysers etc from all the major suppliers such as Agilent, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. As such, we fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 2 year warranty. Our staff have extensive backgrounds in T&M, totalling over 150 years of combined experience, which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, covering the cost of warranty returns BOTH ways (plus supplying a loan unit, if available) and supplying a free business tool with every order.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based near Heathrow Airport in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

Test equipment Solutions Ltd
Unit 8 Elder Way
Waterside Drive
Langley
Berkshire
SL3 6EP

T: +44 (0)1753 596000
F: +44 (0)1753 596001

Email: info@TestEquipmentHQ.com
Web: www.TestEquipmentHQ.com





Fig. 1.1 RF Amplifier Type 52167-301

1.1 INTRODUCTION

The TF 2167 is a solid state power amplifier, which has broadband frequency response from 50 kHz to 80 MHz. It produces ten watts with low harmonic and intermodulation distortion. Gain is 47 dB minimum, constant within 1 dB, and full output is produced with less than 0.1 volt at the 50 Ω input. Most manual and swept tuned signal generators deliver at least 0.1 volt output with a maximum output of +20 dBm. The TF 2167 will raise the power of these devices and thus extend the usefulness and versatility of available generators. Output level is accurately metered and displayed on the front panel. Input and output overload protection is provided so that overdrive or operation into a short or open circuit is possible. The amplifier is packaged for bench mounting and has optional rack mounting. The unit has a self-contained power supply, which can operate from 115 or 230 V a.c., 50/60 Hz.

The TF 2167 is designed to raise the power level of signal sources and generators without requiring tuning or band-switching of the amplifier. Testing and calibration work can be performed with greater speed and convenience than was previously possible. AM, FM, PULSE, SSB and other modulated signals can be amplified to high power levels with minimum distortion.

The TF 2167 has applications in the laboratory with signal generators and power splitters and applications in other instrumentation, such as exciter driver stages for transmitters and power stages in harmonic-generator chains and for wide-band power pulse devices. Receiver testing, wattmeter calibration, antenna testing, RFI testing, attenuator measurements and filter and component testing are also aided with the use of this equipment.

1.2 DATA SUMMARY

FREQUENCY

Bandwidth	50 kHz to 80 MHz.
Response characteristic	Flat ± 1 dB over above bandwidth when feeding 50 Ω load.

OUTPUT LEVEL

10 watts p.e.p. (max.) into 50 Ω load.

GAIN

At least 47 dB.

OUTPUT MONITOR

Voltage ranges	0 to 7 V, 0 to 30 V, switch selected.
Voltage accuracy	$\pm 3\%$ f.s.
Power ranges	0 to 1 W, 0 to 15 W, switch selected.
Power accuracy	$\pm 6\%$ f.s. (into 50 Ω load).

SIGNAL PURITY

Harmonic distortion	Total harmonic content is less than -30 dB relative to fundamental.
Hum and noise	Less than -70 dB relative to 10 W.

INPUT CONDITIONS

Input impedance	50 Ω .
VSWR	1.3:1
Maximum rated input level	0.1 V.

CONNECTORS

BNC input and output.

OVERLOAD PROTECTION

Amplifier limiting and thermostat switch.

Input

With output correctly loaded, input is protected against 3 V overload.

Output

Short and open circuit protected at nominal input. 105 to 125 V or 210 to 250 V.

POWER REQUIREMENTS

AC mains

50 to 60 Hz.

DIMENSIONS AND WEIGHT

Height	Width	Depth	Weight
5 $\frac{1}{4}$ in	8 $\frac{1}{2}$ in	14 $\frac{1}{4}$ in	20 lb
13 cm	22 cm	37 cm	9 kg

1.3 ACCESSORIES

Optional

Rack mounting kit¹ for standard 19" rack - 54127-011