



## TFN TG115 Microwave Signal Generator (100kHz–15GHz)



### Product Overview

The TFN TG115 is a versatile, cost-effective microwave signal generator with a frequency range of 100kHz to 15GHz and extensive modulation, sweep, and pulse modulation capabilities. It is suitable for applications in communications R&D, education, military radar, satellite communications, component testing, and more. Housed in a standard 2U chassis, the TG115 supports remote control and advanced development, making it an ideal choice for laboratories, production lines, and field testing.

### Core Feature Highlights

- Ultra-wide frequency coverage, supporting high-frequency applications  
Frequency range : 100kHz ~ 15GHz, covering high-frequency scenarios such as millimeter wave front-end, 5G, and satellite.  
High frequency accuracy : time base aging rate  $\pm 1\text{ppm/year}$ , temperature stability  $\pm 0.1\text{ppm}$ .
- High signal purity and excellent phase noise  
Phase noise :  $< -115\text{dBc/Hz}@10\text{kHz}$  (typical), ensuring accurate testing.
- Flexible power output and optional dynamic range  
Output power :  $-20\text{dBm} \sim +10\text{dBm}$  (standard), expandable to  $-120\text{dBm}$  with optional programmable attenuator, dynamic range up to  $130\text{dB}$ .
- Comprehensive modulation function, supporting internal and external sources  
Analog modulation : AM/FM/PM, modulation depth, frequency deviation and phase deviation are adjustable.  
Pulse modulation : on-off ratio  $\geq 70\text{dB}$ , supports external trigger and sequence input.  
Built-in LF source : sine, square, triangle, with frequencies up to  $500\text{kHz}$ .
- Multiple scanning modes for more efficient testing  
Scan mode : step/list scan, supports up to  $65535$  scan points.  
Trigger mode : automatic, external, manual, adaptable to complex test processes.
- Standard rack design, easy integration  
2U height, with standard rack mounting kit, allows for easy integration into test systems.  
Rich interfaces : LAN/USB/RS-232, support SCPI remote control.

### Technical Parameters Summary



Category	Parameter
Frequency range	100kHz ~ 15GHz
Phase noise	< -115dBc/Hz@10kHz
Output power range	-20dBm ~ +10dBm (expandable to -120dBm)
Harmonic suppression	≤ -30dBc
Modulation method	AM/FM/ΦM/Pulse
Scan Points	Step: 2~65535, List: 2~16383
Communication interface	LAN, USB, RS-232
Chassis size	430mm × 380mm × 100mm (2U)
weight	≤ 5kg

#### Why choose TFN TG115?

- Solve customer pain points:
  1. High-frequency demand: Covering 15GHz, it meets the high-frequency testing needs of millimeter waves, satellites, radars, etc.
  2. Pure signal: Low phase noise ensures accurate and reliable test data.
  3. Wide dynamic range: up to 130dB after optional attenuator, suitable for large power span testing.
  4. Integration-friendly: Standard 2U chassis and rich interfaces make it easy to embed into automated test systems.
- Typical application scenarios:
  1. 5G/6G communication module R&D and verification
  2. Radar signal simulation and receiver testing
  3. Satellite communication system debugging
  4. Microwave and radio frequency experimental teaching in colleges and universities
  5. Military electronics and aerospace equipment testing

#### Ordering Information:

Configuration	Order Number
Host (microwave signal generator)	TG115



Configuration	Order Number
Programmable attenuator option (supports -120dBm)	TG115-PCA
Rack mount kit	TG115-RMK

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