




Comparison Guide

Company	B&K Precision		Keysight		Aim-TTi	
Model	4088	4089	AP5001A-502	AP5001A-504	TGR2051	TGR2053
						
List price	\$3,990	\$5,990	\$8,514*	\$10,826*	\$3,289	\$5,033
Type	RF signal + AWG / Function generator		RF Signal generator		RF signal generator	
RF Characteristics						
Frequency Range	50 MHz to 1.5 GHz	50 MHz to 3 GHz	9 kHz to 2 GHz	9 kHz to 4 GHz	150 kHz to 1.5 GHz	150 kHz to 3 GHz
Frequency Accuracy	±3 ppm, 0 °C to 40 °C		± 40 ppb, 23 ± 3 °C		< ±1 ppm, 15 °C to 30 °C < ±2 ppm, 5 °C to 40 °C	
Non-harmonics (Spurious)	-60 dBc at 0 dBm		-65 dBc typical (1 MHz to 5.8 GHz) -70 dBc typical (≤ 1 MHz)		< -50 dBc (1.5 GHz to 3 GHz) < -56 dBc (150 kHz to 1.5 GHz)	
Phase Noise	< -117 dBc/Hz (1 GHz carrier @ 10 kHz offset)		-124 dBc/Hz max (500 MHz to 1 GHz @ 20 kHz)		< -124 dBc/Hz typical (500 MHz carrier @ 10 kHz offset) < -117 dBc/Hz typical, (1 GHz carrier @ 10 kHz offset)	
Amplitude Range	-110 dBm to +13 dBm (min output < 2 GHz)		-30 dBm to +17 dBm (max output 50 MHz to 2.5 GHz) Amplitude range min to -120 dBm (optional)		-127 dBm to +13 dBm	
Amplitude Level Accuracy	± 1 dBm output levels (≥ -90 dBm)		± 0.3 dB typical (> -20 dBm to +10 dBm) ± 0.5 dB typical (> -80 dBm to -20 dBm)		± 1 dBm output levels (> -53 dBm) ± 2 dBm output levels (≤ -53 dBm)	
Modulation functions	Analog: AM / FM / PM / Pulse		Analog: AM / FM / PM / Pulse		Analog: AM / FM / PM Digital modulation schemes (optional)	
Arbitrary Waveform						
Sample Rate	250 MSa/s					
Vertical Resolution	16-bit		-		-	
Maximum Waveform Length	4 Mpts					
Function Generator						
Waveforms	Sine, Square, Triangle/Ramp, Pulse		Sine, Triangle, Square		Sine, Triangle/Ramp, Square	
Sine Frequency Range	1 μHz to 50 MHz	1 μHz to 80 MHz	10 Hz to 3 MHz		1 mHz to 1 MHz	
Amplitude Range	1 mVpp to 10 Vpp into 50 Ω		10 mVpp to 2 Vpp		1 Vpp	
Modulation Functions	AM / FM / PM / PWM / BPSK / FSK		-		-	
General						
Remote Interfaces	USB (USBTMC-compliant), LAN, GPIB model option (+\$230)		USB (USBTMC-compliant), LAN, GPIB option (+\$959)		USB (VCP), LAN (LXI), GPIB optional retrofit (+\$183)	
Warranty	3 Years		3 Years		3 Years	