

## SP1641B/SP1642B/SP1643B FUNCTION GENERATOR

### Features:

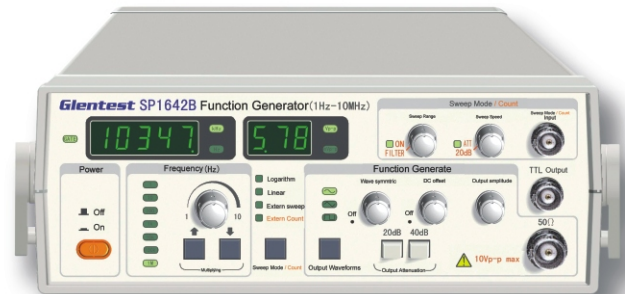
- LSI and MCU circuit design
- Multi waveforms: Sine/Square/Triangle, etc.
- Built-in 5 digit frequency counter (up to 10MHz equal accuracy)
- LED display, amplitude 3 digit and frequency 5 digit
- Various output mode: CW, FM, Sweep Frequency
- DC offset: -5V to +5V, symmetry continuously adjustable
- High reliability: MTBF > 10000 hours
- Full output protection
- Electronic switch used



SP1641B

### Specifications

		SP1641B	SP1642B	SP1643B
MAIN	Output Frequency	0.1Hz - 3MHz	0.1Hz - 10MHz	0.1Hz - 20MHz
	Output Waveform	Sine wave, Square wave, Triangle wave, etc. (7 waveforms)		
	Output Impedance	50Ohm, 600Ohm(TTL), 2kOhm(CMOS)		
	Output Amplitude	10Vpp (50Ohm), 20Vpp (1MOhm)		
	Output Attenuation	0dB/20dB/40dB/60dB		
	Symmetry	20% - 80% or 50%		
SINE WAVE	Distortion Factor	≤ 1%		
SQUARE WAVE	Rise or Fall Time	< 30ns	< 25ns	< 20ns
TTL OUTPUT	Rise or Fall Time	≤ 1μs		
	Low Level	≤ 0.8V		
	High Level	≥ 1.8V		
	Impedance	600Ohm		
CMOS OUTPUT	Level	5V - 15V adjustable		
FREQUENCY COUNTER	Frequency Range	0.1Hz - 50MHz		
	Input Impedance	500kOhm /30pF		
	Input Voltage	50mV-2V(10Hz-40MHz), 100mV-2V(other range)		
	Time Base	10MHz +/- 5x10 <sup>-5</sup> /d		
	Error	Time base error+ Trigger error		
	Measurement Time	0.3s		
	Wave Form	Sine wave, Square wave		
CW SINE WAVE SIGNAL OUTPUT		100Hz, 2Vpp		
SWEEP MODE		Lin./Log./Ext.		
POWER SOURCE		AC115V/230V +/-15%, 50/60Hz		



SP1642B

## SP1631A POWER FUNCTION GENERATOR

### Features:

- LSI and MCU circuit design
- Multi waveforms: Sine/Square/Triangle, etc.
- Built-in 7 digit frequency counter (up to 10MHz equal accuracy)
- LED display, amplitude 3 digit and frequency 7 digit
- Various output mode: CW, FM, Sweep Frequency
- DC offset, symmetry continuously adjustable
- High power output, with independent power amplifier
- High reliability: MTBF > 10000 hours
- Full output protection
- Electronic switch used

### Specifications

		SP1631A
MAIN	Output Frequency	0.1Hz - 3MHz (7 ranges)
	Output Waveform	Sine wave, Square wave, Triangle wave, etc. (7 waveforms)
	Output Impedance	Function and fixed-frequency output: 50Ohm; TTL/CMOS: 600Ohm
	Output Amplitude	Function output: 10Vpp (50Ohm), 20Vpp (1MOhm)
	Output Attenuation	0dB/20dB/40dB/60dB
	DC Offset	-5V - +5V +/-10% (50Ohm) -10V - +10V +/-10% (1MOhm)
	Symmetry	20% - 80% or 50%
	Distortion Factor	<1% (Sine wave)
	Triangle Wave linear	> 99% (at 10%-90% output amplitude)
	Square Wave	≤ 30ns (rise/fall time)
	TTL Output Level	Low ≤ 0.8V, High ≥ 1.8V
	CMOS Output Level	5Vpp - 15Vpp adjustable
Sweep Mode	Lin./Log./Ext.	
FREQUENCY COUNTER	Frequency Range	0.1Hz - 50MHz
	Input Impedance	500kOhm /30pF
	Input Voltage	150mV-2V(0.1Hz-1Hz), 30mV-2V(1Hz-50MHz)
	Time Base	10MHz +/- 5x10 <sup>-5</sup> /d
	Error	Time base error+ Trigger error
Measurement Time	0.3s	
	Wave Form	Sine wave, Square wave
POWER OUTPUT	Output Frequency	0.1Hz - 200kHz (auto cut-off above 200kHz)
	Output Power	10W(0.1Hz-200kHz /80Ohm) 5W(above 100kHz /40Ohm)
	Output Amplitude	≤ 20Vpp empty load, continuously adjustable
POWER SOURCE		AC115V/230V +/-15%, 50/60Hz



SP1631A