

Integrated Clock Programmable Electrical Pulse Generator

IPG-300M

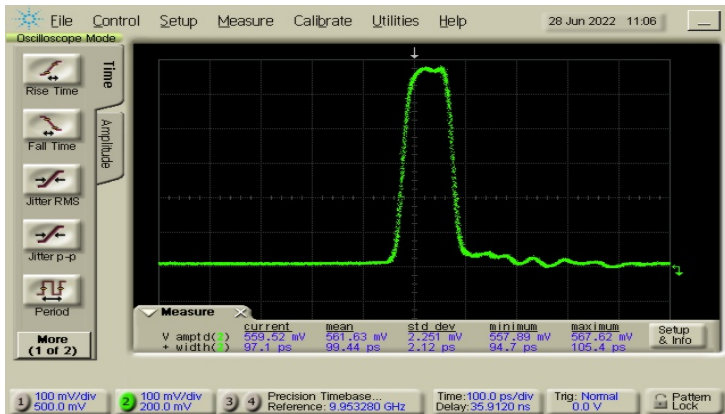
- Pulsewidth tuning range of 100ps~10ns (Optional 50ps~10ns)
- Pulsewidth tuning resolution of 1ps
- Built-in clock with frequency range 100kHz~1GHz



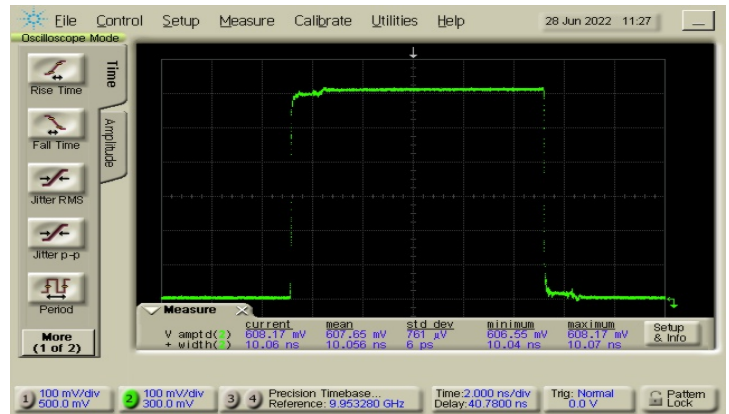
Specification

	Item	Min.	Typ.	Max.	Unit
Clock Output Ports TRIG. PORT, CH1, CH2	Output Clock Frequency	0.0001 (100kHz)		1.000	GHz
	Output Clock Amplitude	300	500		mVpp
	Output Coupling	AC Coupling, Single Ended			
	Output Clock Shape	Rectangular			
	Rise/Fall Time (20% to 80%)		100	150	ps
	Duty Cycle		50	55	%
	Clock Jitter (RMS)		100	500	fs
	Output Impedance		50		Ohm
External Clock <small>(External clock is not required but customer can input external frequency to synchronize with built-in clock)</small>	External Clock Frequency	9.9	10.0	10.1	MHz
	External Clock Amplitude	200	450	1000	mVpp
	External Clock Duty Cycle		50		%
	External Clock Input Resistance (SE)		50		Ohm
Pulse Output Ports OUTPUT +, OUTPUT -	Pulse Shape	Square			
	Pulse Frequency	0.0001 (100kHz)		1.000	GHz
	Pulse Width Tuning Range (FWHM)	"0100"	100	10,000	ps
	Extended Pulse Width Range (FWHM)	"0050"	50	10,000	ps
	Tuning Resolution		1	2	ps
	Rise / Fall Time (20 - 80 %)	15		20	ps
	Output Coupling	AC Coupling, Single Ended			
	Output Voltage	(Standard) ¹	0.4	0.5	0.6
	(High-Voltage Option, "A") ²		> 5.0		Vpp
	Additive Timing Jitter		< 0.7		ps
	Output Impedance		50		Ohm
Electrical Interface	External Clock Input (EXT. CLK)	Advanced SMA x 1			
	Trigger Clock Output (TRIG. OUTPUT)	Advanced SMA x 1			
	Clock Output (CH1, CH2)	2 Ports, Advanced SMA x 2			
	Pulse Output (OUTPUT +, OUPUT -)	2 Ports, Advanced SMA x 2			
	Power Supply Conector	DC Jack, 2.1mm ϕ or MIL14 Pins: Pin1(5V), Pin14(Gnd)			
	PC Interface Connector	Micro USB (Virtual COM Port) MIL14 Pins, 2.5mm for UART LVTTL 3.3V			
Operating & Storing Environment	Operating Temperature	15		40	$^{\circ}$ C
	Storage Temperature	-20		70	$^{\circ}$ C
Physical	Diemnsion (W x H x D)	(Module)	100 x 26 x 74		mm
	Weight	(Module)	< 200		g

(1) Standard version output amplitude is 0.4~0.6Vpp. (2) High voltage of >5Vpp option only available in benchtop version.



100ps Pulsewidth @ Clock Freq. 1MHz



10,000ps Pulsewidth @ Clock Freq. 1MHz

Ordering Information

IPG-300M-XXX-S-P(N)-T-N

M: Module, XXX: 050 or 100, S: Single-ended, P: Positive, T: Tunable, N: No Amplifier
N: Negative,

