HIGH REPETITION RATE POCKELS CELL/SHUTTER DRIVER

- **Adjustable Push-Pull Output to 5.0 kV**
- **≤ 20 ns Risetime at 5.0 kV**
- **High PRF to 45 kHz without Cooling**
- **Rugged Solid-State Design**
- **Opto-Isolated or TTL Trigger Options**
- **Pulse Width from 5 µs to DC**
- **On-Board High Voltage Power Supply**

DESCRIPTION:

The ***Model 8261C*** Pockels Cell/Shutter Driver is designed for high repetition rate, continuous pulsed applications. Solid-state MOSFET technology is used, giving excellent trigger noise immunity and a smooth output waveform. This technique eliminates common problems associated with avalanche, and transformer drivers. Amplitude is continuously variable by adjusting the internal high voltage power supply. The *Model 8261C* is capable of operating at high pulse repetition frequencies, fast risetimes and falltimes, and output pulses up to 5.0 kV. A low voltage monitor pin is provided to monitor the high voltage prior to the pulse. Internal timing is provided to refresh the output at a 5 kHz rate, providing pulsewidth operation from 5 µs to DC.

RoHS 2011/65/EU EXEMPT

SPECIFICATION:

	8261C-1			8261C-2			
PARAMETER	**Min.**	**Typical**	**Max.**	**Min.**	**Typical**	**Max.**	**Units**
INPUT							
Power	+23.5	+24.0	+24.5	+23.5	+24.0	+24.5	VDC
Current (PRF & voltage dependent)	20	-	520	20	-	520	mA
Trigger (TTL, into >500Ω)	+4	-	+10				VDC
Trigger (Opto-isolated, into >2kΩ)				2.5	-	10	mA
Propagation Delay (10V trigger)	-	360	-				ns
Propagation Delay (Opto-isolated)				-	300	-	ns
Trigger Pulsewidth	5.0	-	DC	5.0	-	DC	µs
Trigger Repetition Rate	-	-	45.0	-	-	45.0	kHz
Control Voltage (1kV/V scale)	0	-	5.0	0	-	5.0	VDC
OUTPUT							
Voltage	1.0	-	5.0	1.0	-	5.0	kV
DC Offset Voltage at 5.5kV	-	-	100	-	-	100	VDC
Risetime/Falltime (5pF load, 5.0kV)	-	18.0	20.0	-	18.0	20.0	ns
Risetime/Falltime (23.5pF load, 2.0kV)	-	12.0	14.0	-	12.0	14.0	ns
Pulsewidth (Same as Trigger)	5.0	-	DC	5.0	-	DC	µs
Repetition Rate (Same as Trigger, voltage & load dependent, see chart)	-	-	45.0	-	-	45.0	kHz
Pulse Jitter	-	-	2.0	-	-	2.0	ns
HV Monitor (1kV/V Scale)	0	-	5.0	0	-	5.0	VDC

**Measurements taken at 25˚C ambient temperature. Specifications are subject to change without notice.*

APPLICATIONS:

Driving E-O Q-Switches for Q-Switching Solid-State Lasers, High Voltage Pulser, E-O Shutter

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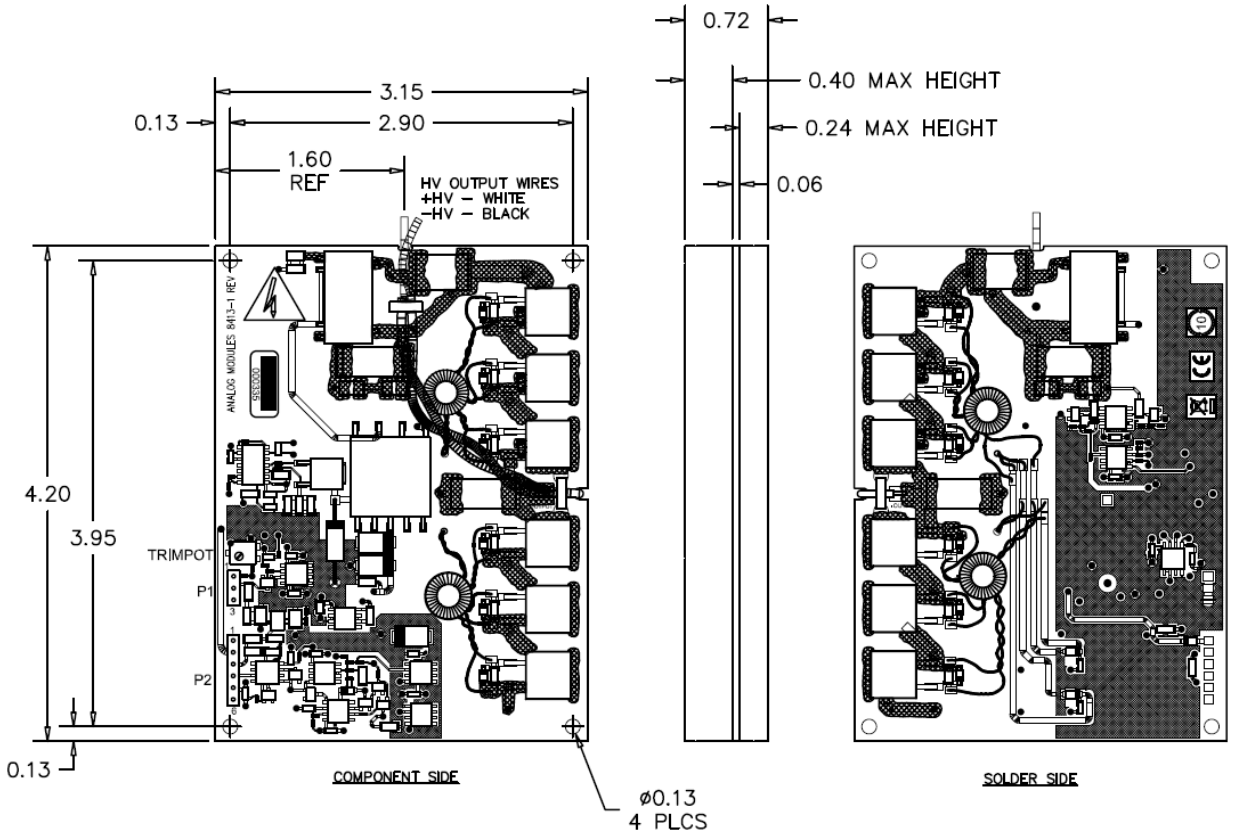
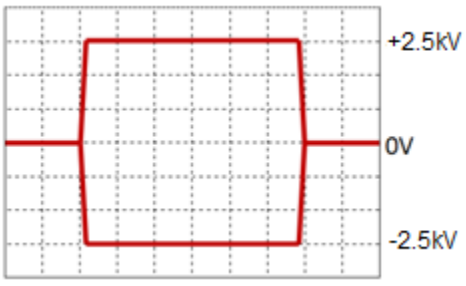
CONNECTIONS:	
Power/Trigger/Control/Monitor:	Panduit MFSS100-6 Connector
External Voltage Control:	Panduit MFSS100-3 Connector
Output:	18 ± 2" Flying Leads
TEMPERATURE:	0ºC to +50ºC Operating
SIZE:	4.20" x 3.15" x 0.72”
WEIGHT:	3.2 oz.
RoHS COMPLIANCE	The 8261C is not classified as electrical or electronic equipment (EEE) under Directive 2011/65/EU per Article 3 Point 1 as the maximum output voltage of this product exceeds 1500 VDC.



CAUTION: Mounting hardware must be Non-Conductive. Nylon hardware is provided.

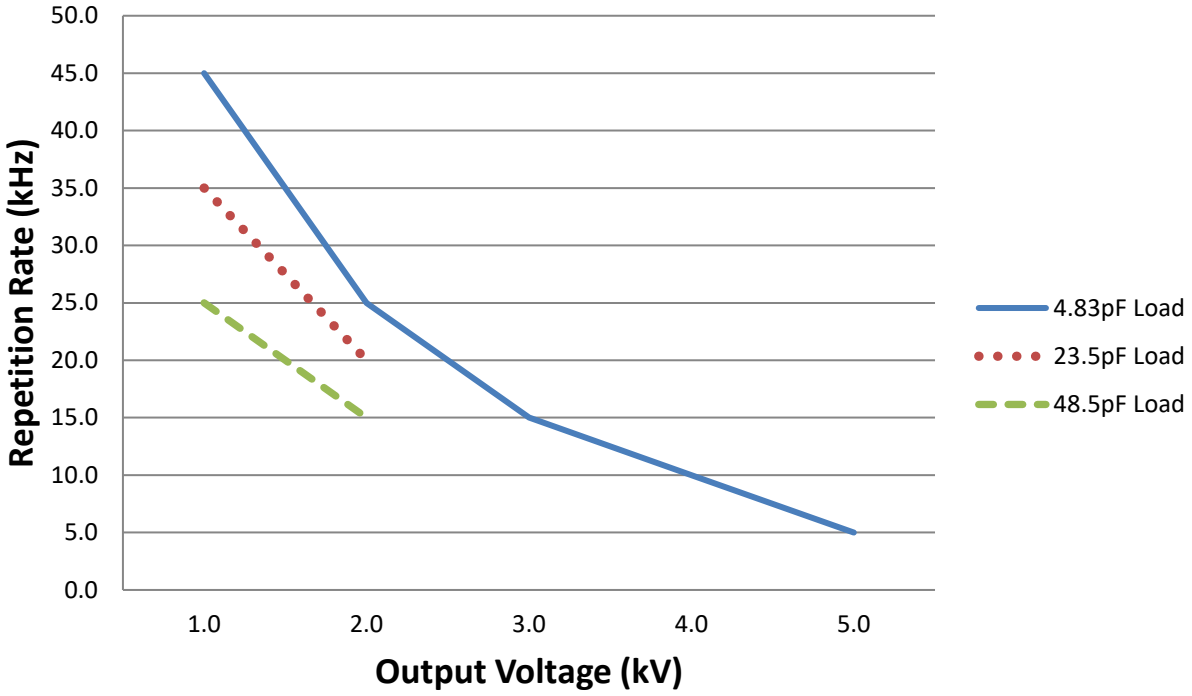
Typical Output Pulse



Pin Connections

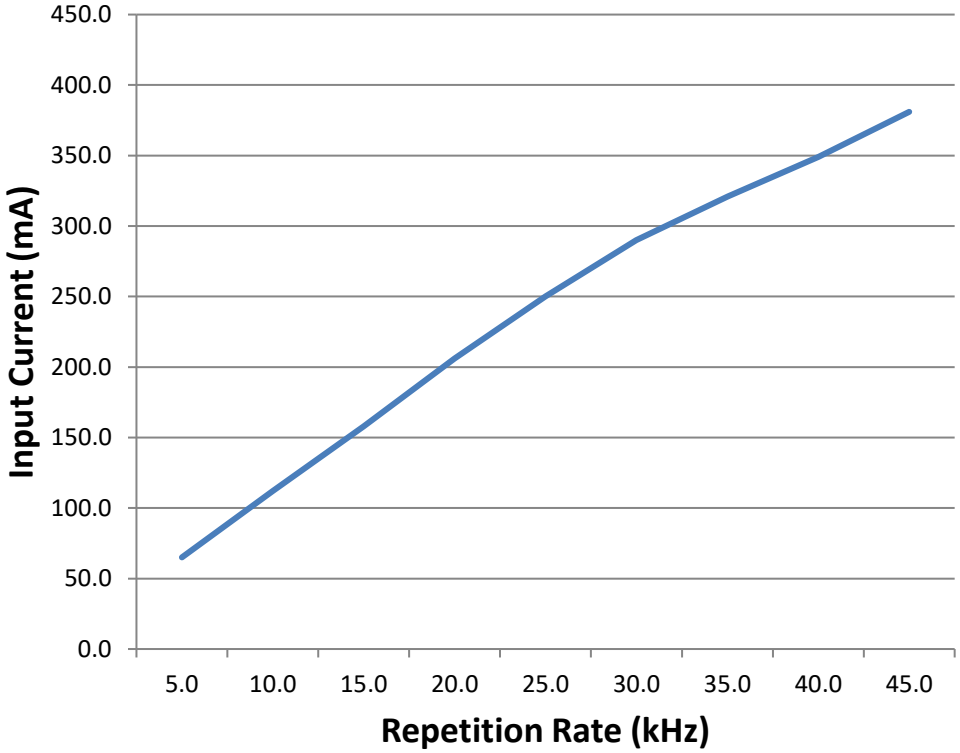
CON	FUNCTION
P1–1	EXT CONTROL CW (OPT)
P1–2	EXT CONTROL WIPER (OPT)
P1–3	EXT CONTROL CCW (OPT)
P2–1	INPUT VOLTAGE (+24VDC)
P2–2	RTN
P2–3	TRIGGER
P2–4	TRIGGER RTN
P2–5	VOUT MONITOR
P2–6	EXTERNAL CONTROL (0–5.5VDC)

Output Voltage vs. Maximum Repetition Rate for Various Loads*



*Measurements taken at 25˚C ambient temperature

Input Current vs. Repetition Rate for a 4.83pF Load



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