HIGH REPETITION RATE POCKELS CELL DRIVER

- **Adjustable Push-Pull Output to 2.0 kV**
- **≤ 7 ns Risetime**
- **High PRF to 50 kHz with no Additional Cooling**
- **Burst up to 2 MHz with Applicable Cooling**
- **Pulse Width from 200 ns up to 95% Duty Cycle**
- **On-Board Circuit Protection**

DESCRIPTION:

The ***Model 8212A-1*** Pockels Cell/Shutter Driver is designed for high repetition rate, 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. The *Model 8212A* has a rise and fall time of less than 7 ns at output voltages up to 2.0 kV and can operate at repetition rates up to 50 kHz with no additional cooling required. Much higher repetition rates are possible with appropriate cooling methods. Contact AMI to discuss your application requirements.

SPECIFICATION:

	8212A-1			
PARAMETER	**Min.**	**Typical**	**Max.**	**Units**
INPUT				
Power	+23.5	+24.0	+24.5	VDC
Current (PRF & voltage dependent)	0.1	-	3.0	A
Trigger (50 Ω)	+4.5	-	5.5	VDC
Propagation Delay (Using 200 ns, 5 V Trigger)	-	-	75	ns
Trigger Pulse width	0.2	-	8000	µs
Trigger Repetition Rate	-	-	2.0***	MHz
OUTPUT				
Voltage	0.7	-	2.0	kV
Risetime/Falltime (6 pF load, 2.0 kV)	-	-	7.0**	ns
Risetime/Falltime (40 pF load, 2.0 kV)	-	-	9.5**	ns
Pulsewidth (Same as Trigger)	0.2	-	8000	µs
Repetition Rate (Same as Trigger, voltage & load dependent)	-	-	2.0***	MHz
Pulse Jitter	-	-	20	ps
HV Monitor (1 V/kV Scale)	0	-	2.0	VDC

Specifications are subject to change without notice.
**Measurements taken at 25˚C ambient temperature.*
***Rise and fall time dependent upon load capacitance and output cable length.*
****Additional cooling required to achieve maximum PRF. Max PRF is 50 kHz with no additional cooling.*

APPLICATIONS:

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

126 BAYWOOD AVENUE ♦ LONGWOOD, FLORIDA 32750-3426 ♦ USA
(407) 339-4355 ♦ FAX (407) 834-3806 ♦ E-mail: ami@analogmodules.com
www.analogmodules.com

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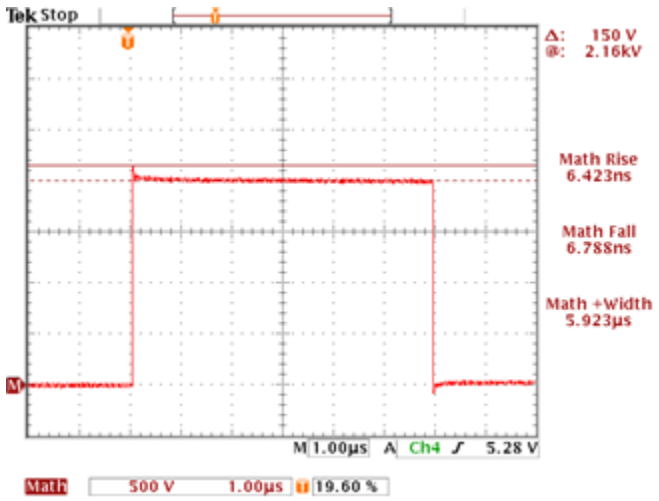
CONNECTIONS:	
Power:	2-Pin Screw Terminal Block (Molex P/N 39357-0002)
Trigger:	SMB Jack Receptacle
External High Voltage Input:	6.0" ± 0.5" Cable Assembly with Molex P/N 39-01-4051
High Voltage Output:	8.0" ± 0.25" Flying Leads
TEMPERATURE:	-40ºC to +70ºC Operating; -40ºC to +85ºC Storage
SIZE:	5.69" x 3.20" x 2.27"
WEIGHT:	13.5 oz.
RoHS COMPLIANCE	The 8212A-1 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 1500VDC.

OUTPUT WAVEFORM:



2.0 kV into 5 pF load

MECHANICAL OUTLINE: