

Tested By: _____

Date: _____

ASC (WFS) Style Detector Measured Parameters

All transimpedance measurements are referred to plane of the physical output connector and include the effect of the voltage divider created by the 50 Ω termination. All notch rejection ratios are relative to the magnitude of the transimpedance at the respective RF detection center frequency of the given RF output port. The notation, Q1 to Q4 refers to the specific quadrant of a four section (Quad) diode.

Unit identification	Value
Photodetector serial number	
Detector schematic D# and revision	
Diode element manufacturer and serial number	

DC Parameters	Value
Quiescent DC current (amps at +18 VDC)	
Quiescent DC current (amps at -18 VDC)	
PD bias regulator output voltage (VDC)	
RF opamp positive voltage regulator (VDC)	
RF opamp negative voltage regulator (VDC)	
Audio opamp positive voltage regulator (VDC)	
Audio opamp negative voltage regulator (VDC)	

DC readout transimpedance (Ω at differential output)	Value
Q1	
Q2	
Q3	
Q4	

Global RF parameters	Value
RF detection center frequency (MHz), f low	
RF detection center frequency (MHz), f hi	
Notch frequencies (MHz) used in design	

Q1 RF notch parameters	Value
Measured DC photocurrent (mA)	
f low, Rejection (dB) at notch1	
f low, Rejection (dB) at notch2	
f low, Rejection (dB) at notch3	
f low, Rejection (dB) at notch4	
f low, to f hi rejection	
f hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	
f hi, to f low rejection	

Q2 RF notch parameters	Value
Measured DC photocurrent (mA)	
f low, Rejection (dB) at notch1	
f low, Rejection (dB) at notch2	
f low, Rejection (dB) at notch3	
f low, Rejection (dB) at notch4	
f low, to f hi rejection	
f hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	
f hi, to f low rejection	

Q3 RF notch parameters	Value
Measured DC photocurrent (mA)	
f low, Rejection (dB) at notch1	
f low, Rejection (dB) at notch2	
f low, Rejection (dB) at notch3	
f low, Rejection (dB) at notch4	
f low, to f hi rejection	
f hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	
f hi, to f low rejection	

Q4 RF notch parameters	Value
Measured DC photocurrent (mA)	
f low, Rejection (dB) at notch1	
f low, Rejection (dB) at notch2	
f low, Rejection (dB) at notch3	
f low, Rejection (dB) at notch4	
f low, to f hi rejection	
f hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	
f hi, to f low rejection	

Q1 RF transimpedance	Value
Photocurrent from Calibrator (mA)	
Transimpedance (Ω) at f low	
Transimpedance (Ω) at f hi	

Q2 RF transimpedance	Value	
Photocurrent from Calibrator (mA)		
Transimpedance (Ω) at f low		
Transimpedance (Ω) at f hi		

Q3 RF transimpedance	Value	
Photocurrent from Calibrator (mA)		
Transimpedance (Ω) at f low		
Transimpedance (Ω) at f hi		

Q4 RF transimpedance	Value	
Photocurrent from Calibrator (mA)		
Transimpedance (Ω) at f low		
Transimpedance (Ω) at f hi		

Q1 Shot-noise limited input sensitivity	Value	
f low (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB
f hi (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB

Q2 Shot-noise limited input sensitivity	Value	
f low (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB
f hi (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB

Q3 Shot-noise limited input sensitivity	Value	
f low (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB
f hi (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB

Q4 Shot-noise limited input sensitivity	Value	
f low (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB
f hi (mA)		
Dark Noise / Preamp Gain. For actual PD output noise, subtract RF preamplifier gain.	dBm/Hz	dB

Q1 test input transconductance	Value	
f low (mA/V)		
f hi (mA/V)		

Q2 test input transconductance	Value	
f low (mA/V)		
f hi (mA/V)		

Q3 test input transconductance	Value	
f low (mA/V)		
f hi (mA/V)		

Q4 test input transconductance	Value	
f low (mA/V)		
f hi (mA/V)		