

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  $\Omega$  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.

<b>Unit identification</b>	<b>Value</b>
Photodetector serial number	
Detector schematic D# and revision	
Diode element manufacturer and serial number	

<b>DC Parameters</b>	<b>Value</b>
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)	

<b>DC readout transimpedance (<math>\Omega</math> at differential output)</b>	<b>Value</b>
Q1	
Q2	
Q3	
Q4	

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

<b>Q1 RF notch parameters</b>	<b>Value</b>
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 hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	

<b>Q2 RF notch parameters</b>	<b>Value</b>
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 hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	

<b>Q3 RF notch parameters</b>	<b>Value</b>
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 hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	

<b>Q4 RF notch parameters</b>	<b>Value</b>
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 hi, Rejection (dB) at notch1	
f hi, Rejection (dB) at notch2	
f hi, Rejection (dB) at notch3	
f hi, Rejection (dB) at notch4	

<b>Q1 RF transimpedance</b>	<b>Value</b>
Transimpedance ( $\Omega$ ) at f low	
Transimpedance ( $\Omega$ ) at f hi	

  

<b>Q2 RF transimpedance</b>	<b>Value</b>
Transimpedance ( $\Omega$ ) at f low	
Transimpedance ( $\Omega$ ) at f hi	

  

<b>Q3 RF transimpedance</b>	<b>Value</b>
Transimpedance ( $\Omega$ ) at f low	
Transimpedance ( $\Omega$ ) at f hi	

  

<b>Q4 RF transimpedance</b>	<b>Value</b>
Transimpedance ( $\Omega$ ) at f low	
Transimpedance ( $\Omega$ ) at f hi	

<b>Q1 Shot-noise limited input sensitivity</b>	<b>Value</b>
f low (mA)	
f hi (mA)	

  

<b>Q2 Shot-noise limited input sensitivity</b>	<b>Value</b>
f low (mA)	
f hi (mA)	

  

<b>Q3 Shot-noise limited input sensitivity</b>	<b>Value</b>
f low (mA)	
f hi (mA)	

  

<b>Q4 Shot-noise limited input sensitivity</b>	<b>Value</b>
f low (mA)	
f hi (mA)	

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

  

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

  

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

  

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