Tested By: Jay Copti **Date: 08/30/2013**

LSC 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.

Parameter	Value	
Detector serial number	S1300534	
Detector schematic D# and revision	D1101124-v7	
Diode element manufacturer's serial number	A6906	
Quiescent DC current (amps at +18 VDC)	70.1 mA	
Quiescent DC current (amps at -18 VDC)	92.5 mA	
PD bias regulator output voltage (VDC)	5.06 VDC	
RF opamp positive voltage regulator (VDC)	5.85 VDC	
RF opamp negative voltage regulator (VDC)	-6.06 VDC	
Audio opamp positive voltage regulator (VDC)	14.77 VDC	
Audio opamp negative voltage regulator (VDC)	-15.35 VDC	
DC path transimpedance and zero light offset (Ω/mVDC at BNC out)	98.6 Ω	0.9 mVDC
DC path transimpedance and zero light offset (Ω/mVDC at differential out)	198 Ω	1.9 mVDC
DC path zero frequency (Hz)	0.2 Hz	
DC path pole frequency (Hz)	2.4 Hz	
Inferred DC path shot noise limited input photo sensitivity (mA) at 100Hz measured at differential output	3.4 mA	
RF detection center frequency (MHz), f low	9 MHz	
RF detection center frequency (MHz), f hi	45 MHz	
Notch frequencies (MHz) used in design	18, 36, 54, 90 MHz	
F low feedback notch frequency	N/A	

F hi feedback notch frequency	N/A	
Rejection (dB) at notch1 (f low)	-31.5 dB	
Rejection (dB) at notch2 (f low)	-35.8 dB	
Rejection (dB) at notch3 (f low)	-37.4 dB	
Rejection (dB) at notch4 (f low)	-33.5 dB	
Rejection (dB) f low to f hi	-34.3 dB	
Rejection (dB) at notch1 (f hi)	-51.7 dB	
Rejection (dB) at notch2 (f hi)	-34.8 dB	
Rejection (dB) at notch3 (f hi)	-30.5 dB	
Rejection (dB) at notch4 (f hi)	-34.5 dB	
Rejection (dB) f hi to f low	-57.2 dB	
Transimpedance (Ω) at f low (note PD Current)	595 Ω	10.5 mA
RF dark/light noise used for f low Trans-Z	-124.7 dBm/Hz	-115.3 dBm/Hz
Transimpedance (Ω) at f hi (note PD Current)	731 Ω	10.5 mA
RF dark/light noise used for f hi Trans-Z	-121.3 dBm/Hz	-113.3 dBm/Hz
RF preamp used during testing (noise/gain)	143 dBm/Hz	20.4 dB
f low, shot-noise limited input sensitivity (mA)	1.34 mA	
f hi, shot-noise limited input sensitivity (mA)	1.96 mA	
Test input transconductance at f1(mA/V)	14.6 mA/V	
Test switch isolation at f1 (dB)	31.9 dB	
Test input transconductance at f2(mA/V)	14.4 mA/V	
Test switch isolation at f2 (dB)	32.5 dB	