## Softrock Lite II RX Test Sheet

Tested By:

Current Draw  With $1 \text{ k}\Omega$ limiting resistor  MA $< 9$ Without $1 \text{ k}\Omega$ limiting resistor  MA $3-6$ Voltage  R11 hairpin $(5 V_{DC} \text{ point})$ $V_{DC}$ $D1$ cathode (square pad)  Local Oscillator  Current Draw  With $1 \text{ k}\Omega$ limiting resistor  MA $< 9$ Without $1 \text{ k}\Omega$ limiting resistor  mA $< 9$ Without $1 \text{ k}\Omega$ limiting resistor  MA $< 20$ Voltage  R11 hairpin $V_{DC}$ $A.5-5$ R15 hairpin $V_{DC}$ $A.5-5$ R15 hairpin $V_{DC}$ $A.5-5$ R17 hairpin $V_{DC}$ $A.5-5$ R17 hairpin $V_{DC}$ $A.5-5$ R17 hairpin $A_{DC}$ $A.5-5$ R17 hairpin $A_{DC}$ $A_{DC}$ $A_{DC}$ $A_{DC}$ Output  LO Output testpoint  MHz  MHz  MHz  MHz	Test	Units	Expected	Measured
With 1 k $\Omega$ limiting resistor mA $< 9$ Without 1 k $\Omega$ limiting resistor mA $3-6$ Woltage R11 hairpin (5 $V_{DC}$ point) $V_{DC}$ 5 D1 cathode (square pad) $V_{DC}$ 11 - 13 Local Oscillator Current Draw With 1 k $\Omega$ limiting resistor mA $< 9$ Without 1 k $\Omega$ limiting resistor mA $< 20$ Woltage R11 hairpin $V_{DC}$ 4.5 - 5 R15 hairpin $V_{DC}$ $< R11$ hairpin $V_{DC}$ $< 2.5$ R17 hairpin $V_{DC}$ $< 2.5$ R17 hairpin $V_{DC}$ $< 2.0$ Output LO Output testpoint MHz 18.73 Dividers Current Draw With 100 $\Omega$ limiting resistor mA $< 20$ Without 100 $\Omega$ limiting resistor mA $< 25$ Woltage Pin 1 $V_{DC}$ 5 Dividere Dray $< 0$ Dividere $< 0$	Power Supply			
Without 1 k $\Omega$ limiting resistor mA 3 - 6   Voltage   R11 hairpin (5 $V_{DC}$ point) $V_{DC}$ 5   D1 cathode (square pad) $V_{DC}$ 11 - 13    Local Oscillator   Current Draw   With 1 k $\Omega$ limiting resistor mA < 9   Without 1 k $\Omega$ limiting resistor mA < 20   Voltage   R11 hairpin $V_{DC}$ 4.5 - 5   R15 hairpin $V_{DC}$ < R11 hairpin R12 hairpin $V_{DC}$ < 2.5   R17 hairpin $V_{DC}$ > 2.0   Output LO Output testpoint MHz 18.73    Dividers   Current Draw   With 100 $\Omega$ limiting resistor mA < 25   Voltage   Pin 1 $V_{DC}$ 5   Pin 2 $V_{DC}$ 3.5 - 4.5	Current Draw			
Voltage  R11 hairpin (5 $V_{DC}$ point) $V_{DC}$ 5  D1 cathode (square pad) $V_{DC}$ 11 – 13  Local Oscillator  Current Draw  With 1 kΩ limiting resistor mA < 9  Without 1 kΩ limiting resistor mA < 20  Voltage  R11 hairpin $V_{DC}$ 4.5 – 5  R15 hairpin $V_{DC}$ < R11 hairpin  R12 hairpin $V_{DC}$ < 2.5  R17 hairpin $V_{DC}$ > 2.0  Output  LO Output testpoint MHz 18.73  Dividers  Current Draw  With 100Ω limiting resistor mA < 20  Without 100Ω limiting resistor mA < 25  Voltage  Pin 1 $V_{DC}$ 5  Pin 2 $V_{DC}$ 3.5 – 4.5	With 1 k $\Omega$ limiting resistor	mA	< 9	
R11 hairpin (5 $V_{DC}$ point) $V_{DC}$ 5	Without 1 k $\Omega$ limiting resistor	mA	3 - 6	
D1 cathode (square pad) $V_{DC}$ 11 – 13    Local Oscillator  Current Draw  With 1 kΩ limiting resistor mA < 9   Without 1 kΩ limiting resistor mA < 20    Voltage  R11 hairpin $V_{DC}$ 4.5 – 5    R15 hairpin $V_{DC}$ < R11 hairpin   R12 hairpin $V_{DC}$ < 2.5    R17 hairpin $V_{DC}$ > 2.0    Output LO Output testpoint MHz 18.73    Dividers  Current Draw  With 100Ω limiting resistor mA < 20   Without 100Ω limiting resistor mA < 25    Voltage  Pin 1 $V_{DC}$ 5   Pin 2 $V_{DC}$ 2.5   Pin 3 $V_{DC}$ 3.5 – 4.5	Voltage			
Current Draw  With 1 k $\Omega$ limiting resistor mA < 9 Without 1 k $\Omega$ limiting resistor mA < 20  Voltage  R11 hairpin $V_{DC}$ 4.5 – 5  R15 hairpin $V_{DC}$ < R11 hairpin  R12 hairpin $V_{DC}$ < 2.5  R17 hairpin $V_{DC}$ > 2.0  Output  LO Output testpoint MHz 18.73  Dividers  Current Draw  With 100 $\Omega$ limiting resistor mA < 20 Without 100 $\Omega$ limiting resistor mA < 25  Voltage  Pin 1 $V_{DC}$ 5 — — — — — — — — — — — — — — — — — —	R11 hairpin (5 $V_{DC}$ point)	$V_{DC}$	5	
Current Draw  With 1 k $\Omega$ limiting resistor  MA  Voltage  R11 hairpin  R12 hairpin  LO Output  LO Output testpoint  MHz  With 100 $\Omega$ limiting resistor  MA  VDC  A.5 - 5  R15 hairpin  VDC  C2.5  R17 hairpin  WDC  Current Draw  With 100 $\Omega$ limiting resistor  What  Without 100 $\Omega$ limiting resistor  WDC  VDC  S1  Pin 2  VDC  A.5 - 5  A.5 - 6  A.5 - 7  A.5	D1 cathode (square pad)	$V_{DC}$	11 - 13	
With 1 k $\Omega$ limiting resistor mA < 9	Local Oscillator			
Without 1 kΩ limiting resistor       mA $< 20$ Voltage       R11 hairpin $V_{DC}$ $4.5 - 5$	Current Draw			
Voltage  R11 hairpin $V_{DC}$ R15 hairpin $V_{DC}$ R16 hairpin $V_{DC}$ R17 hairpin $V_{DC}$ Cutput  LO Output testpoint  MHz  18.73  Dividers  Current Draw  With 100Ω limiting resistor  Without 100Ω limiting resistor  The sister of the sister	With 1 k $\Omega$ limiting resistor	mA	< 9	
R11 hairpin $V_{DC}$ $4.5-5$	Without 1 k $\Omega$ limiting resistor	mA	< 20	
R15 hairpin $V_{DC}$ < R11 hairpin	Voltage			
R12 hairpin $V_{DC}$ < 2.5	R11 hairpin	$V_{DC}$	4.5 - 5	
R17 hairpin $V_{DC}$ > 2.0  Output  LO Output testpoint MHz 18.73  Dividers  Current Draw  With $100\Omega$ limiting resistor mA < 20  Without $100\Omega$ limiting resistor mA < 25  Voltage  Pin 1 $V_{DC}$ 5  Pin 2 $V_{DC}$ 2.5  Pin 3 $V_{DC}$ 3.5 – 4.5	R15 hairpin	$V_{DC}$	< R11 hairpin	
Output LO Output testpoint MHz 18.73	R12 hairpin	$V_{DC}$	< 2.5	
LO Output testpoint MHz 18.73	R17 hairpin	$V_{DC}$	> 2.0	
Dividers       Current Draw       With 100Ω limiting resistor     mA     < 20	Output			
Current Draw $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	LO Output testpoint	MHz	18.73	
With $100\Omega$ limiting resistor mA < 20	Dividers			
Without 100Ω limiting resistor       mA       < 25	Current Draw			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	With $100\Omega$ limiting resistor	mA	< 20	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Without $100\Omega$ limiting resistor	mA	< 25	
Pin 2 $V_{DC}$ 2.5	Voltage			
Pin 3 $V_{DC}$ 3.5 – 4.5	Pin 1	$V_{DC}$	5	
	Pin 2	$V_{DC}$	2.5	
Pin 4 $V_{DC}$ 5	Pin 3	$V_{DC}$	3.5 - 4.5	
	Pin 4	$V_{DC}$	5	-

	$V_{DC}$	2.5	
	$V_{DC}$	0	
	$V_{DC}$	2.5	
	$V_{DC}$	2.5	
	$V_{DC}$	5	
	$V_{DC}$	3.5 - 4.5	
	$V_{DC}$	2.5	
	$V_{DC}$	5	
	$V_{DC}$	5	
	$\mathrm{MHz}$	4.6825	
	$\mathrm{MHz}$	4.6825	
	$V_{pk-pk}$	5	
	$V_{pk-pk}$	5	
$\rightarrow$ clk1	0	90	
limiting resistor	mA	< 30	
$00\Omega$ limiting resistor	mA	< 30	
	$V_{DC}$	2.5	
	$V_{DC}$	2.5	
	$V_{DC}$	2.5	
	$V_{DC}$	0.0	
	$V_{DC}$	2.5	
	$V_{DC}$	2.5	
	$V_{DC}$	2.5	
	$V_{DC}$	5.0	
	$V_{DC}$	5.0	
ged	$V_{DC}$	5.0 2.5	
	limiting resistor	$V_{DC}$	$V_{DC}$ 0 $V_{DC}$ 2.5 $V_{DC}$ 2.5 $V_{DC}$ 3.5 - 4.5 $V_{DC}$ 3.5 - 4.5 $V_{DC}$ 5  MHz 4.6825 $V_{DC}$ 5 $V_{DC}$ 5 $V_{DC}$ 5  A limiting resistor mA $V_{DC}$ 3.5  A limiting resistor mA $V_{DC}$ 3.5 $V_{DC}$ 2.5

R7 bridged	$V_{DC}$	3.75	
R8 bridged	$V_{DC}$	3.75	
Bandpass Filter (BPF)			
Continuity			
Point P to point P	$\Omega$	0	
Point S to point S	$\Omega$	0	
Voltage			
R1 hairpin	$V_{DC}$	2.5	
R2 hairpin	$V_{DC}$	2.5	
Resistance			
R1 hairpin	$\Omega$	800	
R2 hairpin	$\Omega$	800	
Phase			
$R1 \to R2$	0	180	
Mixer (QSD)			
Current Draw			
With $100\Omega$ limiting resistor	mA	< 30	
Without $100\Omega$ limiting resistor	mA	< 30	
Voltage			
Pin 1	$V_{DC}$	0.0	
Pin 2	$V_{DC}$	2.5	
Pin 3	$V_{DC}$	2.3 - 2.5	
Pin 6	$V_{DC}$	2.3 - 2.5	
Pin 7	$V_{DC}$	2.3 - 2.5	
Pin 8	$V_{DC}$	0.0	
Pin 9	$V_{DC}$	2.3 - 2.5	
Pin 11	$V_{DC}$	2.3 - 2.5	
Pin 12	$V_{DC}$	2.3 - 2.5	
Pin 14	$V_{DC}$	2.5	
Pin 15	$V_{DC}$	0.0	
Pin 16	$V_{DC}$	5.0	