Plus_15_VCC
Minus_15_VEE
J2
+15 Vdc Power
-15 Vdc Power
Gnd
Gnd
Gnd
Gnd
Electronics_Power_Supply
GND
~34 mA
L2
BLM31
C1
1UF
D1
TSMA1A6A
U2
IN
OUT
COM
Tab
UA78M05CDCYR
C3
1UF
Plus_5_VCC
~36mA
L1
BLM31
C2
33uF
D2
TSMA1A6A
U3
InTab
OUT
COM
UA79M05CKVURG3
C4
1uf
Minus_5_VEE
R10
3.3k
R11
3.3k
LED_interface
Plus 15 Vdc LED Anode
Plus 15 Vdc Rtn
Minus 15 Vdc LED cathode
Minus 15 Vdc Rtn
Mii Temp Good LED Anode
Mii Temp Good rtn
YIG Signal Good Anode
YIG Signal Good Cathode
J3
Detector_SMA_
J4
L.O. Power Detector
R15
10k
R16
43k
~ minus 0.7V @ 10dBm
R77
100k
R14
10k
C14
1uf
U5A
OPA2348/SOIC
Inverting variable gain detector voltage amplifier, gain of 4.3 to 15
C5
1uf
R29
1k
C18
1uf
No PAD on board, add-on.
Set to >= 9 mW == good (+5V)
(as measured with a calibrated power
meter at the 230 and 650 muBox output
ports)
R19
10k
CW
R78
10k
R17
10k
Pot_High_Wiper
R25
2K
CCW
R75
10k
R26
3.9k
Yig detection threashold adj.
R76
10K
CCW
U6A
C12
1u
TLC3702_1
2.0 volt (nominal) threshold detector
R43
2.2k
YIG_signal_bit_good
U4A
OPA2348/SOIC
R13
1k
R42
2.2k
Adjust R77 so that 10mW at the muBox(s)
230 and 650 ports as measured with a calibrated power meter,
corresponds to 1.000 V.
YIG_RF_Det_analog_20_x
Bar Too Hot goes low if temp greater than high limit
Bar_Too_Hot
C11
1u
R24
8.2k
Output goes low if above ref
Pot_High_Wiper
85 C = 1.700 V
U7A
TLC3702_2
Gain of two Buffer
U5B
OPA2348/SOIC
R2
10k
80 C = 1.600 V
R18
10k
YIG Temperature Window Detector
R20
8.2k
CW
Temp window bottom (~70 C full CCW)
Pot_Low_Wiper
R21
2K
CCW
R23
100k
R22
3.9k
output goes low if below ref
Pot_Low_Wiper
75 C = 1.500 V
U6B
TLC3702_2
C4
1u
U9A
OPA2348/SOIC
LED Buffer
R12
1k
C13
1u
Minus_5_VEE
U8
SN74LVC1G08
R45
2200
High = Good
Mii_Temp_Good
K1
NC
NO
V23026
Plus_5_VCC
Coil_minus
10uF/6volt
external
R9
20k
C7
1u
R8
10k
R6
50hm_5_watt
R27
10k
U4B
OPA2348/SOIC
R44
2.2k
Mii_heater_current
1A = 1V
Mii current sense gain of 2
C6
1u
Minus_5_VEE
R28
20k
J1
Mii Heater supply
Mii Heater supply switched
Mii Temp Pgm1
Mii heater ground
Mii Temp Pgm2
Mii_Heater_interface
R3-6: 6K ~ 80C
2k2
R5
2k2
R4
Yig Heater Temperature Adjust
10K
R7
Relay Driver
U1
Coil_low_A
Ground
Coil_low_B
Control_A
VCC
Control_B
DRDNB21D
Coil_minus
Bar_Too_Hot
Plus_5_VCC
GND
J10
Plus_12_VCC
LM35 #1
LM35 #2
LM35 #3
LM35 #4
LM35 #5
LM35 #6
sense
+12VDC
common
Temperature_Sensors
R31
200
R32
200
R33
200
R34
200
R35
200
R1
200
Yig_Temperature
Norden_Amp_#1_Temperature
RF_Base_Plate_Temperature
YIG_Base_Plate_Temperature
R1
2.7k
R36
2.7k
R37
2.7k
R38
2.7k
R39
2.7k
R40
2.7k
R41
1k
R69
1k
MDM_15_source
Yig temperature analog sense
Norden amp #1 temperature analog sense
RF base plate temperature analog sense
YIG base plate temperature analog sense
Norden #2 temp. sense (mmWave Box)
JPL PA temperature sense (mmWave Box)
1k ohm Power Supply reference (common)
YIG RF detection analog sense
YIG signal level logic bit (+2V is good)
Mii heater current analog sense
Mii temperature logic bit (+2V is good)
Norden Amp #1 current analog (muBox)
Norden Amp #2 current analog (mWave Box)
Norden Amp #3 current analog (mmWave Box)
1k Ohm Power Supply reference (common)
J9
YIG_RF_Det_analog_20_x
YIG_signal_bit_good
Mii_heater_current
Mii_Temp_Good
Norden_Amp_1_current
Norden_Amp_2_current
Norden_Amp_3_current

-bl- Caltech Submm			
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