

2. Technical Description

Type of Emission	20K0F1E
Frequency Range	850 ~ 870 MHz
Range of Operating Power	100 ~ 200W
Maximum output Power Level	200W
Maximum Specified Output Power Rating	Location Dependant per Part 90 Subpart S
Final Stage Amplifier DC Voltage, Current	Voltage: 27.0 Vdc, Current: 51 Amps

2.1 Function of All Active Circuit Devices

Board-TSLPA900-00009-2 Pre-Driver

- D3-D10: varactor diodes comprising part of voltage controlled phase shifter
- D1-D2: PLN diodes comprising part of voltage variable attenuator (VVA)
- Q1: current booster for VVA driver on DCXX-00101
- U1: Detector for RF input power level
- U4: hybrid RF amplifier, driver for Q3
- Q3: Pre-driver output stage
- U2-U3: voltage regulators

Board-TSLPA900-00011-2 Pre-Error Amp

- D3-D10: varactor diodes comprising part of voltage controlled phase shifter
- D1-D2: PIN diodes comprising part of voltage variable attenuator (VVA)
- U1: Detector for first loop cancellation power level
- Q1-Q2: Rf amplifiers, pre –drivers for CP1 on XM120-006-1
- U2: voltage regulator

Board-PSXXX-001-1 Power Conditioner

- Q1-Q8: relay drivers
- D1-D4: relay flyback diodes
- U1-U3: voltage regulators
- U4-U5: voltage inverters

Board-XM120-006-1 Error Amp

- U1: 120W Hybrid power amplifier module, output stage for error amp
- U2: voltage regulator

Board-DCXX-001-1 Controller

- U1: Op-amp
- U2: voltage regulator
- U3: 8-bit microcontroller
- U4: voltage inverter
- U5-U6: voltage regulators
- U7-U8: Op-amps
- U9: voltage regulator
- U10: D-A converter
- Q2: current boost for VVA on pre-error amp

Board-COMSXXX-001 Driver

- U1: Hybrid RF amplifier, driver for main amp