



SS20T500M500A | 20~500MHz, 500W

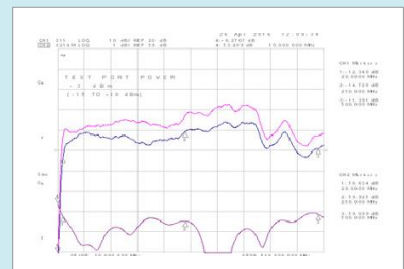
Amplifier General Description

This high power amplifier system covers the frequency range from 20 to 500MHz. This utilizes LDMOS devices that provide high gain and excellent output power performance. With exceptional performance, long term reliability and high efficiency are available by using this application.



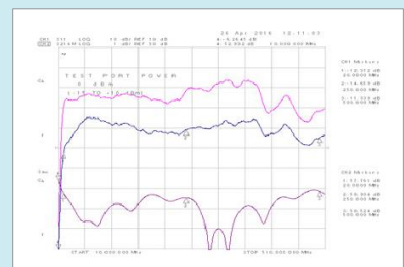
ELECTRICAL SPECIFICATIONS @ 220VAC, 25°C, 50Ω System

| Parameter | Symbol | Specifications | Unit |
|--|-----------|----------------|------|
| Operating Frequency | BW | 20 ~ 500 | MHz |
| Power Output CW | P_{SAT} | 500 Min. | Watt |
| Power Gain @ CW | G1dB | 57 Typ. | dB |
| Input Power Range | P_{IN} | 0 Typ. | dBm |
| Gain Adjustment Range | VVA | 20 Typ. | dB |
| Input Return Loss | S_{11} | -10 Typ. | dB |
| Noise Figure @ maximum gain | NF | 10 Typ. | dB |
| Third Order Intermodulation 2-Tone @ 51dBm/Tone, 1MHz Spacing | IM3 | -20 Typ. | dBc |
| Harmonics @ P_{OUT} (without Harmonic Suppression Filters) | 2ND | -20 Max. | dBc |
| | 3RD | -10 Max. | |
| Spurious Signals | Spur | -60 Max. | dBc |
| Operating Voltage -(1-phase) | VAC | 210 ~ 230 | Volt |
| Power Consumption @ 500W CW | PD | 3000 Typ. | Watt |



Plot 1 – Small Signal Gain and P_{1dB}

Top Curve: Small Signal Gain @ $P_{IN} = -20dBm$ Middle Curve: Power Gain @ P_{1dB} , $P_{IN} = -3dBm$ Reference: 59dB, 1dB/div.
Bottom Curve: Input Return Loss R eference: 20dB, 10dB/Div.



Plot 2 – Small Signal Gain and P_{SAT}

Top Curve: Small Signal Gain @ $P_{IN} = -20dBm$ Middle Curve: Power Gain @ P_{SAT} , $P_{IN} = 0dBm$ R eference: 58dB, 1dB/div.
Bottom Curve: Input Return Loss Reference: 10dB, 10dB/Div.