

2.1033(c)(8)

Question: The dc voltages applied to and dc currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

The final radio amplifying device consists of four BLF147 HF Field Effect Transistors configured in push-pull-parallel. The voltage and current supplied to this final radio amplifying device is supplied through T254 for the push pull transistor pair of Q252 and Q251 and through T259 for the push pull transistor pair of Q254 and Q253. The sum of the current supplied to T254 and T259 is the current to the final radio amplifying device and is of the value not to exceed 30 amperes RMS at the point of PEP (Peak Envelope Power) when providing 200 W PEP of RF power out of the power amplifier. Additional current of 5 amperes RMS is required in transmit mode for devices prior to the final radio frequency amplifying device. The DC voltage supplied to the final radio amplifying device is nominally +27.5 volts, and at that voltage the current at the point of PEP when providing 200 W PEP is nominally 20 to 25 amperes. For supply voltages from +22 to +32 VDC, and for frequencies from 2 to 29.9999 MHz., the PEP current to the final radio amplifying device will approach the not to exceed 30 ampere RMS value at the point of PEP.