

AAVT-PRO-C CIRCUIT DESCRIPTION

Description of circuits employed for suppression of spurious emissions, limiting modulation and limiting power:

In the final amplifier stage L14 ,VC1 , VC2 , L5 , C58 , C62 , C64 , L6 , L7 and Antenna (using a Microphone cable) forms a band-pass filter. The band-pass filter suppresses the out of band emission.

In the transmitter audio amplifier IC3 forms an operational amplifier which clips and suppresses excess audio input voltage. This limits the voltage applied to the modulator and the deviation of the transmitter.

Description of circuit for determining and stabilizing frequency:

Designation	Type No.	Diode, Transistor
Q1	2SC4215Y	Transistor
D2	HVU306	Variable Capacitance Diode
X1,X2		Crystal

The above components are located in the oscillator circuit of the transmitter. The oscillator circuit is standard pierce type. The frequency stability is maintained by X1,X2 at crystal.

To compensate temperature drift over the operating range , TH1 ,C19 and C22 are provided , these thermistor and capacitors and a native temperature coefficient.

Thus the temperature drift is minimized.

Description of circuit with CTCSS

CTCSS Tone frequency are generated by #15 pin of IC5 and then mixed at IC3. There are 48 kinds of CTCSS Tone frequencies which are located between 67.0Hz and 250.3Hz. These CTCSS tone frequency will be set up by SW2.