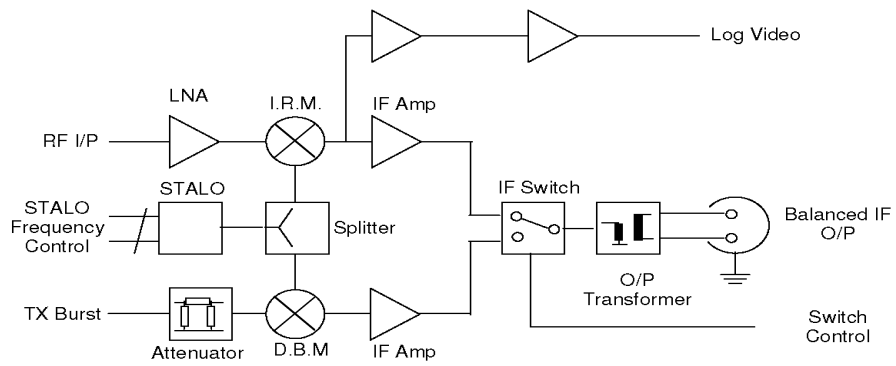
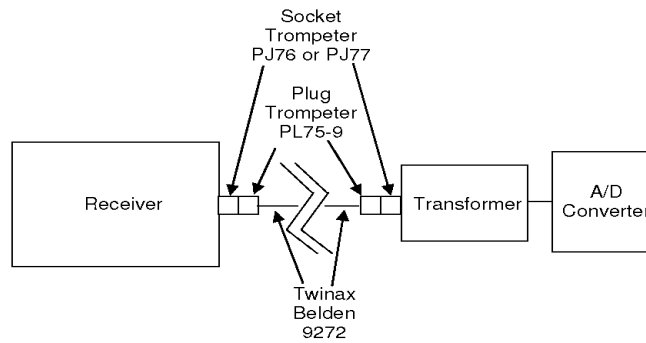


S-Band		
RF Input Frequency Range	2950+/-20MHz min	
-3 dB RF Bandwidth	200 MHz min	
Minimum Detectable RF Signal	-111 dBm	@ SNR=1 dB, BW = 1 MHz Predicted noise figure 1.8dB
Dynamic Range	89 dB minimum	Predicted dynamic range in 1MHz bandwidth. I/P at Max O/P & nominal gain to I/P noise floor.
IF Output 1dB Compression Point	+15 dBm min	
Log Output 1 dB Compression Point	5 V	
IF Frequency	30MHz	
-3 dB IF Bandwidth	4 MHz nominal	
RF to IF gain overall	25dB min, 37dB nominal	
Image Signal Rejection	25 dB min	
Linearity	± 1dB	
Receiver Stability	± 1dB	After warm up
STALO Tuning Range	50MHz	
STALO Tuning Step Size	100kHz	
Switching Speed	<500 microseconds	Frequency settling time
Synthesizer Spurious	<-70 dB	
STALO Stability	± 0.5 ppm max	
STALO Phase Noise	-110dBc/Hz @20kHz offset	
Noise Figure (overall)	2dB max	Predicted noise figure including receiver protection loss 1.8dB
Receiver Protection	0.4W min	At LNA input
Tx Burst Length/Pulse Width	1 µs, 2 µs	
Tx Burst Signal Level	47 dBm peak	
RF Input Impedance	50 Q	
RF Input Mechanical Interface	N-type bulkhead	
IF Output Impedance	50 Q	Balanced twisted pair
IF Output Mechanical Interface	Trompeter BJ77	
Tx Burst Input Impedance	50 Q	
Tx Burst Input Mechanical Interface	N-type bulkhead	
Supply Voltage	110 ÷ 220 VAC	
Temp Range, operation	0 to 60°C	
Temp Range, storage	-40 to +85°C	

X-Band		
RF Input Frequency range	9595 $\pm$ 20 MHz min	
-3 dB RF Bandwidth	200 MHz min	
Minimum Detectable RF Signal	-111 dBm	@ SNR=1 dB, BW = 1 MHz Predicted noise figure 2dB
Dynamic Range	89 dB	Predicted dynamic range in 1MHz bandwidth. I/P at Max O/P & nominal gain to I/P noise floor
IF Output 1dB Compression Point	+15 dBm min	
Log Output 1 dB Compression Point	5 V	
IF Frequency	30MHz	
-3 dB IF Bandwidth	4 MHz nominal	
RF to IF gain overall	25dB min, 37dB nominal	
Image Signal Rejection	25 dB min	
Linearity	$\pm$ 1dB	
Receiver Stability	$\pm$ 1dB	After warm up
STALO Tuning Range	50MHz	
STALO Tuning Step Size	100kHz	
Switching Speed	<500 microseconds	Frequency settling time
Synthesizer Spurious	<-70 dB	
STALO Stability	$\pm$ 0.5 ppm max	Within 0 – 60 °C range
STALO Phase Noise	-110dBc/Hz @20kHz offset	
Noise Figure (overall)	2.3dB max 2.0dB max goal	Predicted noise figure including receiver protection loss 2.0dB
Receiver Protection	0.4W min	Limiter at LNA input
Tx Burst Length/Pulse Width	1 μ s, 2 μ s	
Tx Burst Signal Level	47 dBm peak	
RF Input Impedance	50 Q	
RF Input Mechanical Interface	N-type bulkhead	
IF Output Impedance	50 Q	Balanced twisted pair
IF Output Mechanical Interface	Trompeter BJ77	
Tx Burst Input Impedance	50 Q	
Tx Burst Input Mechanical Interface	N-type bulkhead	
Supply Voltage	110 $\div$ 220 VAC	
Temp Range, operation	0 to 60°C	
Temp Range, storage	-40 to +85°C	



Weather radar receiver block diagram S & X band



Receiver Interconnection to A/D Converter