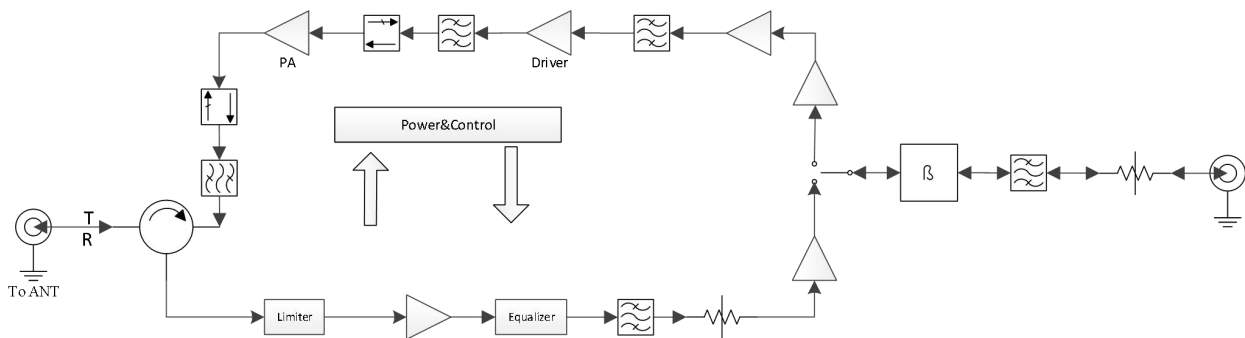


Features

The T/R module primarily enables signal power amplification and low-noise amplification of small signals. It features time-division transmit/receive operation and anti-burnout capability. The modules exhibit high consistency in transmit power, receive channel gain, and phase among units.

Function Block Diagram



Specifications

Test Item		Symbol	Unit	Test	Typ.
Receive Branch	Noise Figure	NF	dB	V_{CC3} : +12V	≤ 2.5
	Gain	G_{in}	dB		18 ± 1.5
	In-band Ripple	ΔG_{in}	dB		≤ 1.5
	Gain Ripple Between T/R	ΔA	dB	V_{CC3} : +12V	≤ 1 @same freq. point
	Phase Ripple Between T/R Units	$\Delta \phi$	°		$\leq \pm 10$ @同频点
	Anti-burnout Power	P_{PM}	W		≥ 500 @12%duty cycle
	Transmit-Receive Isolation	ISO	dB		≥ 20
	Receive VSWR	$VSWR$	/		≤ 1.5
	Phase Shifter Bits	/	/		6 位
	Phase Shifting Accuracy	$\Delta \theta$	°		$\leq \pm 5$
	Branch Desaturation Time	t	μs		≤ 1
Transmit Branch	Transmit Power	$P_{O(sat)}$	W	V_{CC1} : ±50V V_{CC2} : +28V V_{CC3} : +12V	≥ 300
	Duty Cycle	q	%		≤ 12 (max pulse width 95 μs)
	Transmit Pulse Top Flatness	ΔP_o	dB		≤ 1.5
	In-band Power Inconsistency	$\Delta P_{O(sat)}$	dB	Under different phase shift states	≤ 1
	Power Inconsistency Between T/R Units				≤ 1 @same freq. band

	Transmit Phase Ripple Between T/R Units	$\Delta \phi$	°	V_{CC1} : ± 50V V_{CC2} : +28V V_{CC3} : +12V	$\leq \pm 10$ @whole band
	Transmit Branch Out-of-band Rejection	Rfs	dBc		≥ 60 @50MHz out-of-band
					≥ 80 @100MHz
					≥ 100 @200MHz
	Pulse Rise/Fall Edge	Δt	ns		≤ 200
Other	Current	I_{CC1}	A	$\pm 50V \pm 5\%$	≤ 2.5 @12% duty cycle
		I_{CC2}	A	$+28V \pm 5\%$	≤ 0.3
		I_{CC3}	A	$+12V \pm 5\%$	≤ 0.5
	ID Recognition Function	/	/		yes
	Self-test Function	/	/		yes

Product Render

The dimensions are 280mm × 140mm × 37.5mm.

