

High-Efficiency RF Portfolio

2026 Product Catalog

Switch to GaN: Smaller. Cooler. Smarter.

TagoreTech GaN RF switches replace legacy PIN diode switching with a fully integrated, modern RF solution.

Built on gallium nitride, a wide-bandgap semiconductor capable of higher voltages, higher power density, and higher efficiency than silicon, TagoreTech switches deliver compact, high-power RF switching in a single integrated device. The result: up to 1000x lower power consumption and a dramatically reduced component count compared to conventional designs.

PIN diode switching, largely unchanged since the Apollo era, remains the incumbent technology in RF systems today. It depends on complex bias networks, high-voltage generation circuitry (up to 200 V), and numerous discrete passives - adding size, power draw, and test complexity at every level of the design.

TagoreTech GaN switches eliminate that overhead, enabling smaller, more efficient, and more reliable RF signal chains.

TagoreTech GaN RF enables RF switching from 1 MHz to 18 GHz, supporting P_{avg} 10 –200 W / up to 630Wpeak

Engineering Challenge

LEGACY PIN DIODE SWITCHES

55 components
300 mm² board area



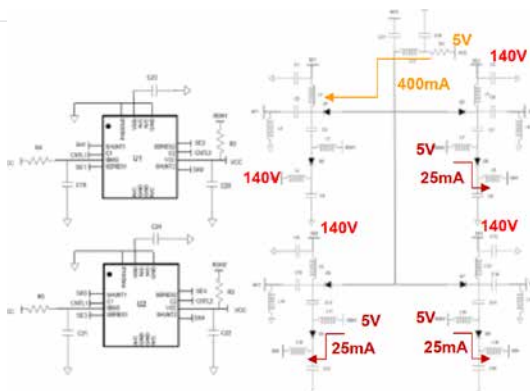
2.5 W power consumption



Complex bias network, highvoltage controllers



Production variability - hard to test in-line



Example of SP4T PIN diode schematics and voltages & currents present. Totally more than 50 components needed to realize RF switch.

Modern Solution

TAGORETECH RF GaN SWITCH

2–4 components
<30 mm² board area



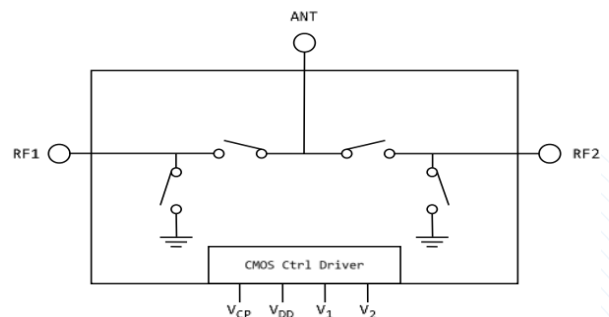
<1 mW power consumption



Single 3.3 / 5 V control
no HV bias on board



100% tested, stable PCB yield

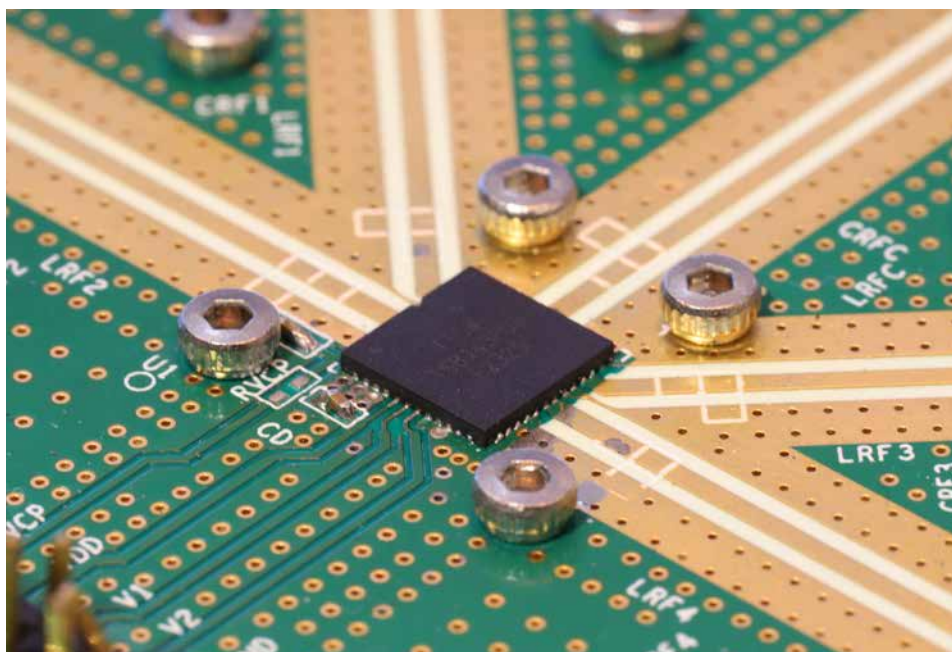
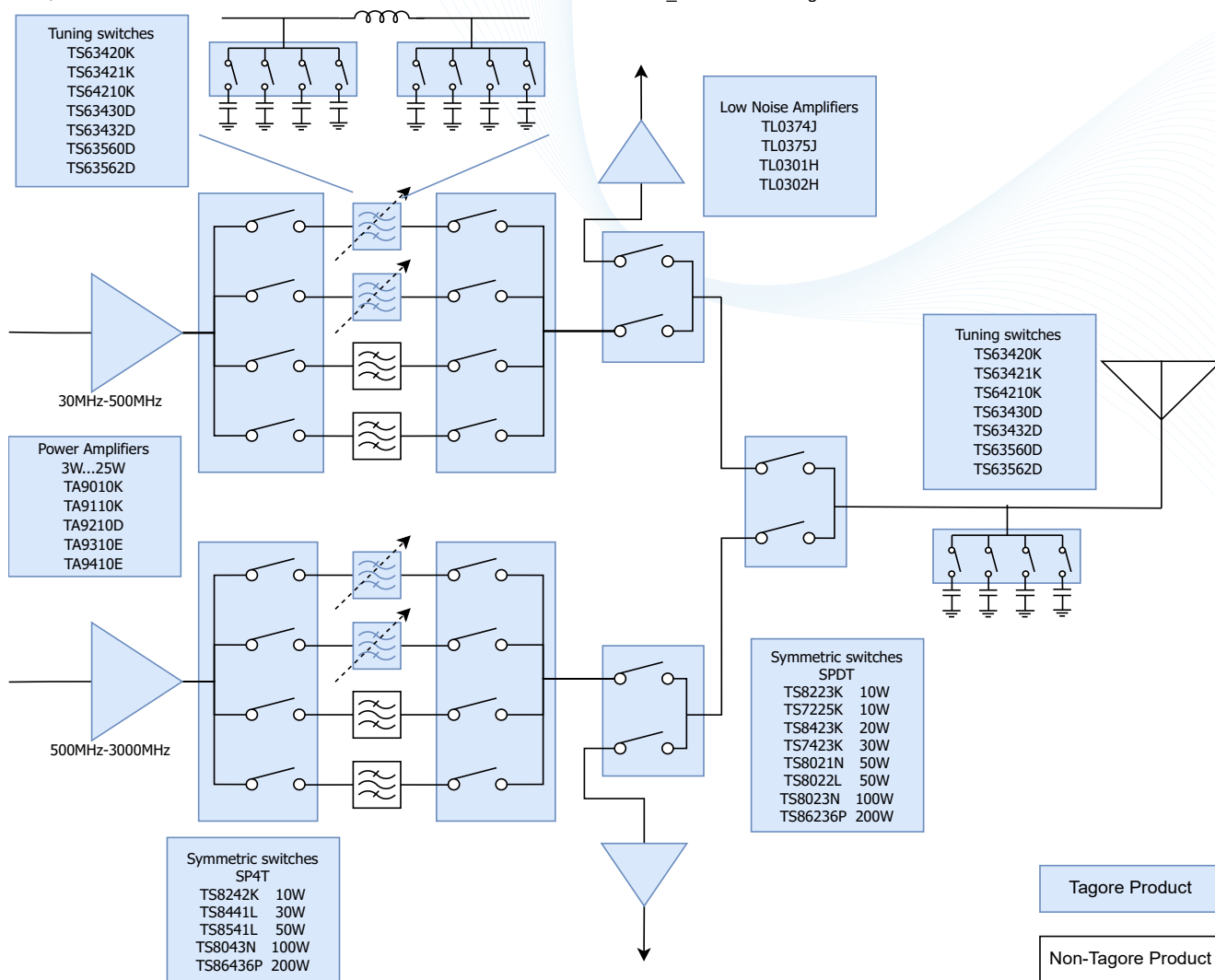


TagoreTech RF GaN function diagram, RF switch requires only a few passives, 3.3V or 5V Vdd and implies your RF design.

LMR/PMR, Tactical & MILCOM Radio Applications

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Tactical_radio3.drawio.svg



Tagore TS86236P SPDT 200W CW switch mounted on PCB

High Power Switch Portfolio - Symmetric Switches

Part Number	SPnT	Type	Frequency	P0.1dB (CW)	IL 1/max GHz	Isolation 1 max GHz	H2/H3	Switching Time	Package	VDD Supply
10 W										
TS8223K NEW	2T	Reflective	300MHz-8.5GHz	10W	0.35/0.6dB	47/22dB	Pin=40dBm tbd dBc	130ns	3x3	2.6 - 5.5V
TS7225FK	2T	Reflective	30MHz-6GHz	10W	0.35/0.9dB	40/15dB	Pin=40dBm -81 dBc	0.7us	3x3	2.6 - 5.5V
TS8242FK	4T	Reflective	1MHz-6GHz	10W	0.30/0.8dB	40/18dB	Pin=40dBm -86 / -89 dBc	0.6us	3x3	2.6 - 5.5V
20 W										
TS8423K	2T	Reflective	1MHz-7.2GHz	20W	0.2/0.5dB	46/22dB	Pin=40dBm -92 / -95 dBc	0.9us	3x3	2.6 - 5.5V
TS8361M NEW	6T	Reflective	1MHz-3.0GHz	20W	Tbd	Tbd	Tbd	0.9us	6x6	2.6 - 5.5V
TS8381M NEW	8T	Reflective	1MHz-3.0GHz	20W	Tbd	Tbd	Tbd	0.9us	6x6	2.6 - 5.5V
30 W										
TS7423L	2T	Reflective	1MHz-6.0GHz	30W	0.2/0.6dB	42/18dB	Pin=40dBm -92 / -95 dBc	0.9us	4x4	2.6 - 5.5V
TS8441L	4T	Reflective	1MHz-4.5GHz	30W	5.0/0.9dB	37/20dB	Pin=42dBm -81 / -90 dBc	0.8us	4x4	2.6 - 5.5V
50 W										
TS8021N	2T	Reflective	1MHz-5GHz	50W	0.25/0.5dB	40/20dB	Pin=45dBm -87 / -95 dBc	5.2us	5x5	2.6 - 5.5V
TS8022L	2T	Reflective	1MHz-6GHz	50W	0.2/0.6dB	40/20dB	Pin=45dBm -87 / -95 dBc	5.2us	4x4	2.6 - 5.5V
TS8541L	4T	Reflective	30MHz-4.3GHz	50W	0.26/0.5dB	45/24dB	Pin=40dBm -84 / -86dBc	2.3us	4x4	2.6 - 5.5V
100 W										
TS8023N	2T	Reflective	1MHz-3.5GHz	100W	0.2/0.4dB	42/27dB	Pin=47dBm -88 / -85 dBc	12us	5x5	2.6 - 5.5V
TS8043N	4T	Reflective	30MHz-2.5GHz	100W	0.4/0.45dB	36/36 dB	Pin=45dBm -76 / -79 dBc	12us	5x5	2.6 - 5.5V
200 W										
TS86246P	2T	Reflective	1MHz-1GHz	200W	0.08dB @30MHz	49dB @30M	Pin=50dBm -93 / -94 dBc	72us	7x7	2.6 - 5.5V
TS86236P	2T	Reflective	30MHz- 1.7GHz	200W	0.11dB @200MHz	38dB @1GHz	Pin=50dBm -88 / -91 dBc	26us	7x7	2.6 - 5.5V
TS86436P	4T	Reflective	30MHz- 1.3GHz	200W	0.13dB @200MHz	36dB @1GHz	Pin=50dBm -88 / -91 dBc	12us	7x7	2.6 - 5.5V

Xband High Power Switch Portfolio

SAMPLES AVAILABLE

Part Number	SPnT	Type	Frequency	P0.1dB (CW)	IL 1/max GHz	Isolation 1/ max GHz	H2/H3	Switching Time	Package	VDD Supply
TSX221K NEW	2T	Reflective	500MHz-12.0GHz	10W	0.2/1.2dB	40/20dB	Pin=40dBm TBD dBc	130ns	3x3	2.6 - 5.5V

Bypass Symmetric Switches

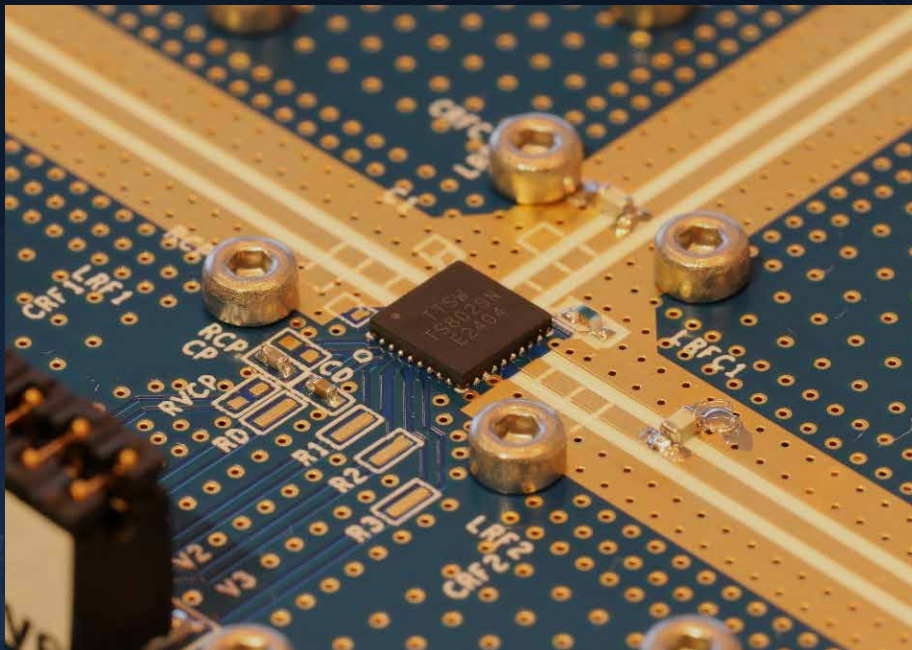
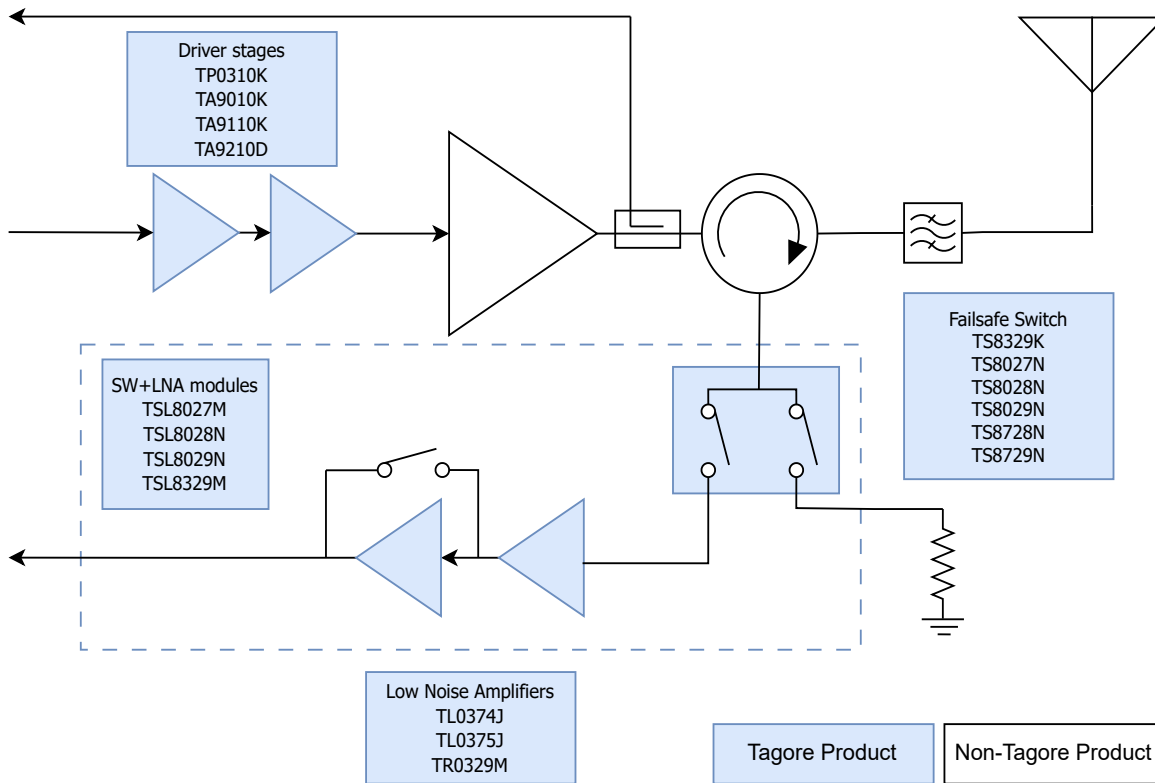
Part Number	SPnT	Type	Frequency	P0.1dB (CW)	IL 1/max GHz	Isolation 1/max GHz	H2/H3	Switching Time	Package	VDD VCP Supply
Application Note: High power switch solution for ultralow switch spur noise										
10 W										
TS82420K	4T	Reflective	30MHz-6GHz	10W	0.25/0.8dB	40/18dB	Pin=40dBm 86 / 89 dBc	0.6us	3x3	2.6 - 5.5V, -18 V
20 W										
TS82250K	2T	Reflective	30MHz-5GHz	20W	0.2/0.5dB	46/22dB	Pin=40dBm -92 / -95 dBc	0.9us	3x3	2.6 - 5.5V, 18 V
TS84230K	2T	Reflective	1MHz-7.2GHz	20W	0.2/0.5dB	46/22dB	Pin=40dBm -92 / -95 dBc	0.9us	3x3	2.6 - 5.5V, -18 V
30 W										
TS84410L	4T	Reflective	1MHz-4.5GHz	30W	5.0/0.9dB	37/20dB	Pin=40dBm -81 / -90 dBc	0.8us	4x4	2.6 - 5.5V, -18 V
50 W										
TS80210N	2T	Reflective	1MHz-5GHz	50W	0.25/0.5dB	40/20dB	Pin=45dBm -87 / -95 dBc	5.2us	5x5	2.6 - 5.5V, -18 V
TS80220L	2T	Reflective	1MHz-6GHz	50W	0.2/0.5dB	40/20dB	Pin=45dBm -87 / -95 dBc	5.2us	4x4	2.6 - 5.5V, -18 V
TS85410L	4T	Reflective	30MHz-4.3GHz	50W	0.2/0.5dB	40/20dB	Pin=40 dBm -84 / -86 dBc	2.3us	4x4	2.6 - 5.5V, -18 V
100 W										
TS80430N	4T	Reflective	30MHz-2.5GHz	100W	0.37/0.5dB	36/36dB	Pin=45dBm -76 / -79 dBc	12us	5x5	2.6-5.5V, -18 V

Low-noise bypass disable the internal pump to reduce HF/VHF noise. The internal charge pump is disabled to minimize noise in HF/VHF bands. The user must provide an external -18 V supply; bypass current < 100 μ A.

Selected 200 W models offer industry-leading noise performance. Quiet-charge-pump models (TS86246P, TS86236P, TS86436P) include an internal low-noise pump and achieve noise floor < -140 dBm/Hz.



5G Cellular Infrastructure & Radar Applications



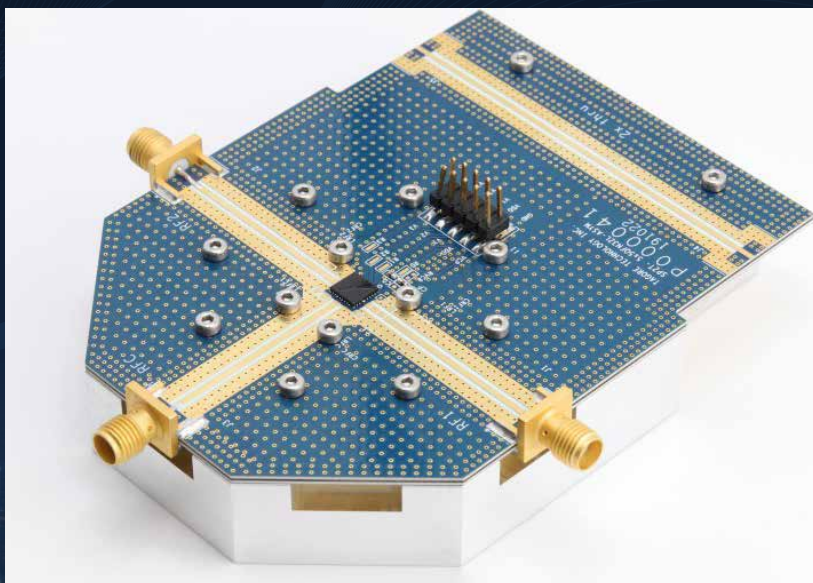
Independently Controlled and FailSafe Switches

Independently Controlled RF Symmetric Switches

Part Number	SPnT	Type	Frequency	P0.1dB (CW)/ Peak Power	IL 1/max GHz	Isolation 1/max GHz	H2/3 (35dBm)	Switching Time	Package	VDD Supply
10 W										
TS72461K	4T	Reflective	0.4-3.8GHz	10 / 60W	0.4/0.9dB	40/22dB	-77dBc	1.2us	3x3	2.6 - 5.5V

FailSafe Receiver Protection Switches

Part Number	SPnT	Type	Frequency	P0.1 dB (CW)/Peak Power	IL TX (2.7GHz)	IL RX (2.7GHz)	Isolation RX (2.7GHz)	Switching Time	Package	VDD Supply
TS8329K	2T	Reflective	0.7-8.5 GHz	20/ 100Wp	0.35dB	0.45dB	38dB	0.35us	3x3	2.6 - 5.5V
TS8028N	2T	Reflective	0.7-5.0 GHz	100/ 500Wp	0.37dB at 3.6GHz	0.5dB at 3.6GHz	38dB at 2.6GHz	1.6us	5x5	2.6 - 5.5V
TS8029N	2T	Reflective	0.7-5.0 GHz	100/ 630Wp	0.41dB at 2.4GHz	0.6dB at 2.4GHz	40dB at 2.4GHz	1.2us	5x5	2.6 - 5.5V
TS8728N	2T	Reflective	0.5-4.0 GHz	250/ >400Wp	0.39dB at 3.55GHz	0.8dB at 3.55GHz	33dB at 3.55GHz	0.7us	5x5	2.6 - 5.5V
TS8729N	2T	Reflective	0.5-2.0 GHz	300/ >550Wp	0.2dB at 1.3GHz	0.6dB at 1.3GHz	47dB at 1.3GHz	1.6us	5x5	2.6 - 5.5V



Filter/Ant Tuning Switch: High Peak Voltage, Low Ron

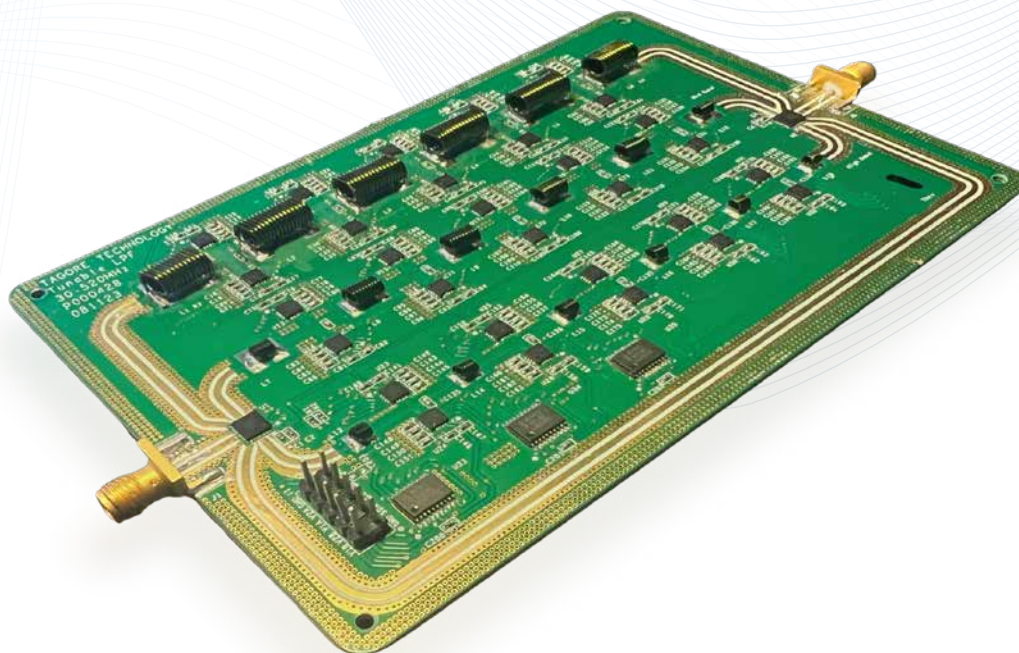


Antenna Tuning Switches

Part Number	SPnT	Reflective Off Ports	Ron (Ω)	Peak RF Voltage (V)
TS64210L	2T	Open	1.1	120
TS63421K*	4T	Open	1.1	100
TS63410K	4T	Open	1.1	100
TS63430D NEW	4T	Open	0.5	100
TS63432D NEW	4T	Open	0.5 / Common Ground	100
TS63560D NEW	4T/5T	Open	0.25 / 0.5 / ... Binary Weighted	100
TS63562D NEW	4T/5T	Open	0.25 / 0.5 / ... Binary Weighted, Common Ground	100

*Internal Charge Pump Disabled

SAMPLES AVAILABLE



Tunable Low Pass Filter with 30-520MHz passband realized with Tagore tuning switches

GaN Individual Power Amplifier Transistors / Power Amplifiers

High-efficiency GaN power devices and PA solutions for LMR, PMR, MILCOM and tactical radio applications.



Part Number	Frequency	Linear Gain at 0.9GHz	Psat @ 0.9 GHz	PAE @ 0.9 GHz	Voltage	Applications	Package
UNMATCHED							
TA9011 SAMPLES Q4/2026	0.03 – 4.0 GHz	17.0 dB	3 W	55%	32 V	CW, Pulsed, Modulated	3x3 QFN
TA9110K	0.03 – 4.0 GHz	17.0 dB	6 W	55%	32 V	CW, Pulsed, Modulated	3x3 QFN
TA9210D	0.03 – 4.0 GHz	18.0 dB	12.5 W	55%	32 V	CW, Pulsed, Modulated	3x6 QFN
TA9310E	0.03 – 4.0 GHz	17.0 dB	20 W	55%	32 V	CW, Pulsed, Modulated	6x5 DFN
TA9410E	0.03 – 4.0 GHz	20.0 dB	25 W	> 55%	32 V	CW, Pulsed, Modulated	6X5 DFN
INTERNALLY MATCHED							
TA9810 SAMPLES Q4/2026	0.03 – 4.0 GHz	19.0	100W	65%	50 V	CW, Pulsed, Modulated	NI360



TagoreTech TA9210D Power Amplifier Evaluation board

Key features

- New low-power driver TA9010K: eliminates need for extra 12 V rail, simplifying DC rails and BOM.
- Wideband efficiency: exceptional efficiency across 30 MHz – 4.0 GHz.
- Tunable PA EVB: evaluation board for rapid tuning and verification in tactical radio use cases.
- Application EVBs: pre-built evaluation boards for common LMR/PMR/MILCOM bands and power levels.
- Modular design support: BOMs and reference bias circuits available to speed integration.
- Custom design services: application support and design for customer-specific bands and power requirements.
- Verification & test: EVBs available for performance validation and in-system testing.

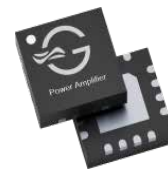
Benefits

- Simplified power architecture — fewer rails, lower BOM cost.
- Faster timetomarket with ready EVBs and reference designs.
- Scalable for 10 W–200 W systems and wide frequency coverage.
- Improved thermal and powerdensity performance vs legacy silicon.



GaN Integrated Power Amplifiers

High-efficiency GaN power devices and PA solutions for LMR, PMR, MILCOM and tactical radio applications.



Performance over Full Frequency Range

Part Number	Frequency	Linear Gain	Psat	PAE	Voltage	Applications	Package
RECONFIGURABLE PA							
TA9217 SAMPLES Q4/2026	0.7 – 2.7 GHz	16.0	12.5 W	60%	32 V	CW, Pulsed, Modulated	6x7 LGA
TA9218 SAMPLES Q4/2026	1.2 – 2.6 GHz	17.0	12.5 W	65%	32 V	CW, Pulsed, Modulated	6x7 LGA
TA9417 SAMPLES Q1/2027	0.7 – 2.7 GHz	16.0	25 W	60%	50 V	CW, Pulsed, Modulated	6x7 LGA
TA9418 SAMPLES Q1/2027	1.2 – 2.6 GHz	17.0	25 W	65%	50 V	CW, Pulsed, Modulated	6x7 LGA

Reconfigurable Power Amplifier Family

- Highly integrated RF power amplifier modules and Tx front ends - internally matched to 50 Ohms, minimizing external components and board space
- Digitally reconfigurable impedance matching, enabling narrowband-like output power, efficiency and gain performance in octave to multi-octave bandwidth.
- Ideal for software defined tactical radio and communication link applications where power consumption, size and weight are critical.
- Please inquire with Tagore representatives for detailed information and full product portfolio



Deliverables & support

- Application EVBs for verification
- Tunable PA EVB for tactical radios
- BOMs and bias-circuit reference designs
- Engineering support for custom radio boards and integration



Low Noise Amplifiers & FrontEnd ICs



TL0374J LNA EVB 30MHz - 3GHz

Low Noise Amplifiers and Gain Blocks

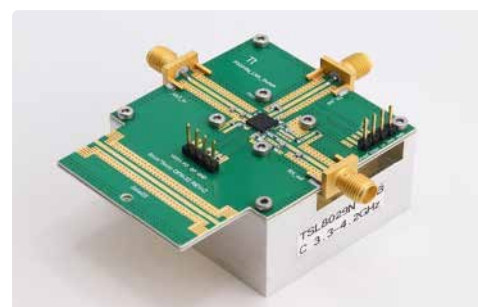
Part Number	Frequency	Test Freq	Gain (dB)	LNA NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Voltage	Package
TL0374J	0.03 – 3.0 GHz	2.6 GHz	19.0	0.37	19.5	36.5	5.0 V	2x2 DFN
TL0375J	2.0 – 5.0 GHz	3.6 GHz	17.5	0.40	19.5	33.0	5.0 V	2x2 DFN
TP0310K	0.03 – 3.8 GHz	2.5 GHz	17.5	1.10	27.0	37.0	5.0 V	3x3 DFN
TL0301H	5.1-6.0 GHz	5.5 GHz	17.5	0.90	12.0	17.0	3.3 V	1.5X1.5 DFN
TL0302H	5.9-7.2 GHz	6.6 GHz	13.5	1.4	12.0	16.0	3.3 V	1.5X1.5 DFN
TR0329M	2.0 - 4.2 GHz	3.6 GHz	Low gain mode:15.0	0.50	10.5	22.0	5.0 V	3.5 X 3.5 QFN
			High gain mode:32.0	0.50	20.0	35.0		

Switch LNA modules / Massive MIMO FrontEnd ICs

Part Number	Frequency	Test Freq	Power Handling	Gain Rx Mode (dB)	NF (db)	OP1dB (dBm)	OIP3 (dBm)	Voltage	Package
TSL8329M	3.3 – 4.2 GHz	3.6 GHz	43 dBm LTE avg, 8 dB PAR	Low gain mode:13.0	0.9	19.5	36.5	5.0 V	6x6 QFN
				High gain mode:32.0	1.0				
TSL8029N	2.0 – 5.0 GHz	3.6 GHz	100W avg, 630W peak	Low gain mode:14.5	1.3	19.5	33.0	5.0 VN	5x5 QFN
				High gain mode:33.0	1.4				
TSL8028N NEW	2.0 – 5.0 GHz	3.6 GHz	100W avg, 630W peak	Low gain mode:14.5	1.1	27.0	37.0	5.0 V	5x5 QFN
				High gain mode:33.0	1.2				
TSL8027N NEW	1.4 – 5.0 GHz		100W avg, 630W peak	SAMPLES Q4/2026					6x6 QFN



TagoreTech Front end module TSL8329M for TDD mMIMO applications, SW+LNA



TagoreTech Front end module TSL8029N for TDD basestation applications, SW+LNA

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Navi Miglani +1 978 729 2529
Navi.Miglani@tagoretech.com

Sales and Support (Asia: China, Taiwan, Japan, Korea, Vietnam, Singapore, Pakistan, and Malaysia)

Scott Li +86 138 1781 8819
Scott.Li@tagoretech.com

Sales and Support (China)

Jacky Joao +86 18607559849
jacky0821@tagoretech.com

Sales and Support (Europe, Türkiye, Middle East, Africa)

Steve Nugent +353 87 616 6248
Steve.Nugent@tagoretech.com

Sales and Support (India, Australia, NZ)

Harry J Peechatt +91 8951573707
harry0822@tagoretech.com

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