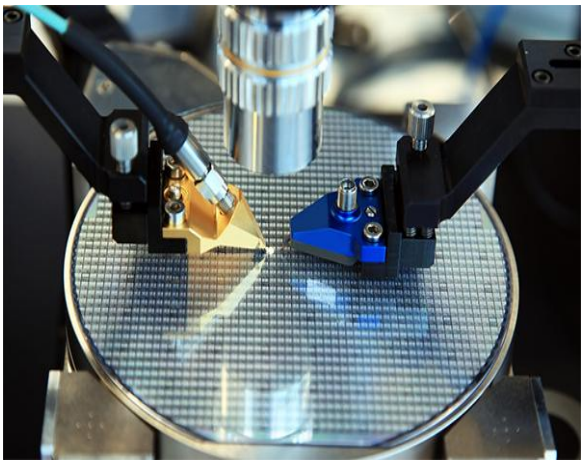
天府芯
TIANFUCHIP







Products

Selection Guide2026

TianfuChip Technology (Chengdu) Co., Ltd

Company Overview

TianfuChip, headquartered in the high-tech zone of Chengdu, China, is a premier leader in the design and development of high-performance RF chips and modules. With over 11 years of industry-leading expertise, we have established ourselves as a trusted partner for sophisticated RF solutions across the global telecommunications market.

Our Core Capabilities

We specialize in the full lifecycle of RF engineering—from intricate chip-level design to complex module integration. With 1,000+ off-the-shelf products development experience, we understand that unique projects often require unique specs. Our R&D team provides:

- Die-level & Packaged Chip options (QFN, Ceramic, Hermetic).
- SiP (System-in-Package) integration for miniaturization.
- Strict Screening: Environmental stress screening (ESS) for military-grade reliability.

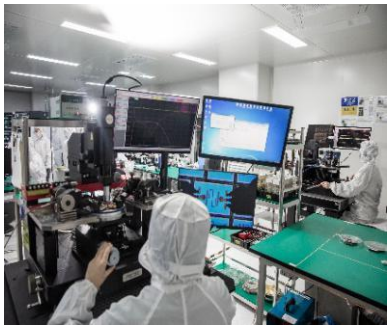
Quality & Reliability Commitment

Every product, whether a high-volume shelf item or a bespoke custom solution, undergoes rigorous testing under our ISO9001 certified quality management system. Our mission is to deliver "Zero-Failure" performance for mission-critical applications in Radar, SATCOM and Test & Measurement instruments.

Contact Our Engineering Team

Ready to discuss your next high-frequency challenge? Our technical experts are available to provide consultation and design support for your specific application.

- Headquarters: Chengdu, China
- Specialization: DC - 80 GHz RF Solutions
- Service: 1,000+ Standard Products & Full Customization Support



Product Portfolio Matrix

Our extensive library of over 1,000 standard products is categorized to provide end-to-end solutions for the entire RF signal chain.

Products	Category	Key Product Types	Frequency Range
MMIC Products	Amplifiers	Low Noise (LNA), Power (PA), Wideband, Gain Block	DC to 80 GHz
	Control Components	Digital Attenuators, RF Switches, Phase Shifters	DC to 50 GHz
	Frequency Conversion	Mixers, Up/Down Converters, Multipliers	Up to 67 GHz
	Signal Generation	VCOs, Synthesizers, Dividers	Up to 40 GHz
	Passive Components	Power Dividers, Equalizers, Filters, Limiters, Detectors	DC to 50 GHz
SiP & Modules	Integrated Modules	Transceiver Front-ends, Up/Down Converters，Frequency sources	Custom/Standard

High-Performance Custom Microwave Solutions

Leveraging our extensive portfolio of hundreds of proprietary RF chips and a comprehensive design library of proven case studies, we provide bespoke microwave assembly solutions tailored to your specific requirements. We cover a broad frequency spectrum from DC to 80 GHz, ensuring that even the most demanding performance specifications are met.

Our integrated design-to-production workflow guarantees rapid lead times without compromising on stability or high-reliability standards. Whether you require complex multi-function modules or specialized components, our expertise ensures a seamless transition from concept to high-quality products.

Our Core Advantages

- Broad Frequency Coverage: Precision engineering from DC up to 80 GHz.
- Extensive IP Library: Thousand's of in-house RF chips and design libraries to accelerate development.
- Unmatched Reliability: Rigorous quality control for mission-critical applications.
- Fast-Track Delivery: Optimized supply chain and design processes for industry-leading turnaround times.

Typical Design Cases

Ku-Band Transceiver Module

The Ku-band transceiver module is primarily used in satellite communication, telemetry, and related testing equipment. It features high sensitivity, high dynamic range, and low noise.

- Operating Frequency Band: 10GHz~15GH
- Number of Channels: 2
- Transmit Power: -80dBm ~ 20dBm
- Receive Sensitivity: ≤-90dBm
- Spurious Suppression: ≤-60dB

Transceiver Channel Module

The transceiver channel module is mainly used in radio communication, detection, and related test systems. It features high sensitivity, high dynamic range, and low noise.

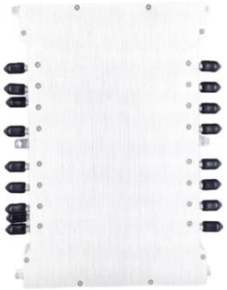
- Operating Frequency Band: 1MHz ~ 4GHz
- Number of Channels: 2
- Receiver Bandwidth: Internally Integrated Electrically Tunable Filter
- Receive Sensitivity: ≤-100dBm
- Spurious Suppression: ≤-60dB
- Transmit Power: -90dBm ~ 100dBm

Switch Matrix

The switch matrix module is primarily applied in RF front-end antenna switching, transmit/receive (T/R) switching, and related testing equipment. The product features low noise, high linearity, and superior isolation performance.

- Operating Frequency Band：30MHz～4GHz
- Number of Channels：14
- Noise Figure：≤3dB
- Switch Isolation：≥50dB
- OIP3：≥40dBm

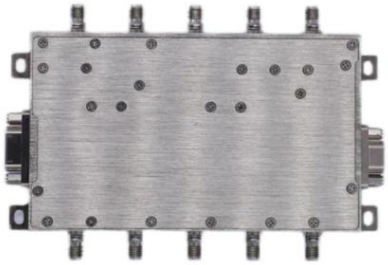
Channel Module



The ultra-wideband channel module is primarily used in direction finding, and communication equipment. It features wide output frequency range, high dynamic range, and high integration.

- Operating Frequency Band：1.5MHz ~ 40GHz
- Number of Channels：8
- Attenuation Adjustment Range：0dBm ~ 50dBm
- Operating Mode：Silent/Transmit Mode
- Spurious Suppression：≤-55dB

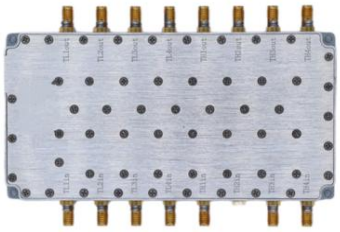
Multi-channel RF Front-end



The multi-channel RF front-end is primarily used in direction finding, signal reception, and related testing equipment. It features high integration, amplitude/phase consistency, and high stability.

- Operating Frequency Band：1GHz~18GHz
- Number of Channels：5
- Attenuation Adjustment Range：0dBm~30dBm
- Operating Mode：Low Noise/Normal Mode/Calibration Mode
- Amplitude Consistency：≤1dB
- Phase Consistency：≤10°
- Temperature Stability：≤1dB

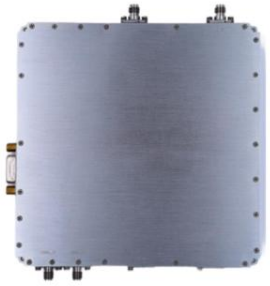
Channel Module



The Conditioning Module is primarily utilized in sampled signal preprocessing, signal reception, and related testing equipment. The product features high integration, high dynamic range, and low noise characteristics.

- Operating Frequency Band：30MHz～3GHz
- Number of Channels：8
- Attenuation Adjustment Range：0dBm~60dBm
- Gain：≥60dB
- 1dB Compression Point：≥18dB

TR Frequency Conversion Module



The QV-band T/R module is primarily employed in satellite communications, ground base stations, and related testing equipment. The product demonstrates high sensitivity, high dynamic range, and low noise characteristics.

- Operating Frequency Band：37GHz~50GHz
- Number of Channels：2
- Transmit Power：-50dBm~10dBm
- Receiver Sensitivity：≤-80dBm
- Spurious Suppression：≤-60dB

MMIC Bare Die Products

1、Control Products

1.1 RF Switches

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Isolation (dB)	Voltage (V)
TFC112A	DC-20	Absorptive/SPDT	1.6	50	0/-5V
TFC113	DC-20	Absorptive/SPST	1.9	48	0/-5V
TFC113B	DC-20	Absorptive/SPST	1.5	60	0/+5V
TFC113-1	DC-50	Absorptive/SPST	1.6	40	0/+5V
TFC114	DC-20	Absorptive/SPDT	1.7	50	0/-5V
TFC114B	DC-20	Absorptive/SPDT	1.5	55	0/+5V
TFC114-4B	DC-4	Reflective/SPDT	0.4	60	0/+5V
TFC114-4D	DC-4	Reflective/SPDT	0.5	45	0/+5V
TFC116B	DC-20	Absorptive/SP4T	2	60	0/+5V
TFC116BM	DC-20	Absorptive/SP4T	2	60	0/+5V
TFC116-PD	DC-20	AbsorptiveSP4T	2	50	0/+5V
TFC117	0.1-8	Absorptive/SPDT	0.9	60	0/+5V
TFC118-PD	DC-10	AbsorptiveSP8T	2.5	50	0/+5V
TFC118-6MPD	0.1-8	Absorptive/SP8T	1.6	55	0/+5V
TFC118-6PD	0.1-8	Absorptive/SP8T	1.6	55	0/+5V
TFC119	0.1-20	Absorptive/SPST	1.4	50	0/+5V
TFC120	0.1-20	Absorptive/SP4T	2	40	0/+5V
TFC120M	0.1-20	Absorptive/SP4T	2	40	0/+5V
TFC120-6	0.1-6	Absorptive/SP4T	0.9	60	0/+5V
TFC120-6M	0.1-6	Absorptive/SP4T	0.9	60	0/+5V
TFC121	0.1-50	Reflective SPDT	2	40	0/+5V
TFC122	0.1-40	Absorptive/SP4T	3	40	0/+5V
TFC127	0.1-20	Absorptive/SPDT	1.5	60	0/+5V

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Isolation (dB)	Voltage (V)
TFC127M	0.1-20	Absorptive/SPDT	1.5	60	0/+5V
TFC128	0.1-40	Absorptive/SPDT	1.5	45	0/+5V
TFC128M	0.1-40	Absorptive/SPDT	1.5	45	0/+5V
TFC129-1	DC-18	Reflective/SPDT	1	40	0/-5V
TFC182-11A	0.1-40	Reflective/SPDT	0.8	--	40

1.2 Voltage Variable Attenuators

Part#	Frequency (GHz)	Insertion Loss (dB)	Attenuation Range (dB)	IP1dB (dBm)
TFC2201	0.001-6	2.5	0-30	18

1.3 Temperature-variable Attenuators

Part#	Frequency (GHz)	Attenuation Range (dB)	Return Loss (dB)	Insertion Loss (dB)
TFC192-3B	DC-36	3	15	4
TFC192-3C	DC-32	3	15	4
TFC192-6A	DC-50	6	15	4.5

1.4 Phase Shifters

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Phase Shift Range (°)	Voltage (V)
TFC252L	1.7-2.7	6-bit	3.5	5.625-360	0/-5V
TFC266	0.8-2	6-bit	8.5	5.625-360	0/+5V
TFC267	1.2-1.8	6-bit	4	5.625-360	0/+5V
TFC257PD	12-18	6-bit	9	5.625-360	0/+5 V
TFC259	8-12	6-bit	7	5.625-360	0/-5V

1.5 True Time Delays

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Delay Range (ps)	Delay error (ps)	Voltage (V)
TFC281	6-18	7-bit	18	1.5-190.5	1.5	0/+5V
TFC288A	0.1-18	6-bit	10	1.25-78.75	±0.5	0/+5V
TFC289A	0.1-18	4-bit	15	40-600	±5	0/+5V

1.6 Digital Step Attenuators

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Attenuation Range (dB)	Voltage (V)
TFC211H	0.5-12	6-bit	2	0.5-31.5	0/+5V
TFC212	0.1-18	6-bit	2	0.5-31.5	0/+5V
TFC216H	0.5-18	6-bit	3	0.5-31.5	0/+5V
TFC219	0.5-18	5-bit	1.5	0.5-15.5	0/+5V
TFC234C	DC-20	3-bit	2.6	5-35	0/+5
TFC234D	1-20	3-bit	2.6	5-35	0/+5
TFC217B	DC-20	7-bit	2.7	0.25-31.75	0/+5V
TFC241-12A	DC-12	6-bit	2	0.5-31.5	0/+5V
TFC241LPD	DC-18	6-bit	4	0.5-31.5	0/+5V
TFC242A	DC-50	7-bit	6	0.25-31.75	0/+5V
TFC242PD	DC-40	6-bit	6	0.5-31.5	0/+5V

2、RF Amplifiers

2.1 Low Noise Amplifiers

Part#	Frequency (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	Power Supply
TFC180-5	0.4-4	30	1.5	18	+5V@55mA
TFC301-1A	0.5-4	18	1.8	20	+5V @85mA
TFC301-10A	0.5-4	22.5	0.9	19.5	+5V@48mA
TFC301-11	0.5-4	32	0.7	19.5	+5V @65mA
TFC301-2	0.5-4	21	5	14	+5V @35mA
TFC309	1-9	25	0.8	15.5	+5V@65mA
TFC390A	DC-40	15	2.5	14	+5V@67mA
TFC390A-50	DC-50	16	3	11	+5V@75mA
TFC312	18-32	26	2.2	13	+5V @60mA
TFC314	6-28	23.5	2	17.5	+5V @77mA

Part#	Frequency (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	Power Supply
TFC320	6-18	23	1.1	13.5	+5V @28mA
TFC320H	6-18	22	1.3	16	+5V @45mA
TFC329H	2-8	27	0.9	13	+5V @37mA
TFC332	0.7-2.5	28.5	0.6	16	+5V @62mA
TFC334	2-4	25	0.9	16	+5V @60mA
TFC343	18-40	14	2.2	12.5	+5V @27mA
TFC344	24-40	19.5	1.8	12	+5V @40mA
TFC345	24-40	21	2	3.5	+5V @13mA
TFC346	32-38	22	1.5	10.5	+5V @29mA
TFC360H	DC-20	19	2.3	15.5	+8V @70mA
TFC361	2-18	17	2.3	14	+5V @67mA
TFC362H	1-20	17	2.5	16	+5V @64mA
TFC363H	2-20	21	3	14	+5V @42mA
TFC363L	2-18	25	1	13	+5V @37mA
TFC363S	2-20	23	1.5	16.5	+5V @65mA
TFC364	0.8-18	16.5	1.9	18	+5V @45mA
TFC366H	0.05-20	23.5	1.7	11	+5V @55mA
TFC367	0.1-18	15	1.8	15	+5V @36mA
TFC368	0.8-20	17	2.5	14	+5V @58mA

2.2 Medium Power Amplifiers

Part#	Frequency (GHz)	Gain(dB)	NF(dB)	Saturated Power (dBm)	OP1dB(dBm)	Power Supply
TFC180-13	0.02-6	21	1	29	28	+5/+8/+10V @125mA
TFC400-2A	0.03-6	14	2	28.5	28	+12V@170mA
TFC401	0.8-18	9.5	6	22.5	20	+5V @105mA
TFC402	6-18	25	1.5	18	17	+5V @60mA
TFC406	1-10	20	1.2	21.5	20.5	+5V @65mA

TFC410	10-40	8.5	4.5	21	19.5	+5V @106mA
TFC418H	0.8-20	13	3	29.5	29.5	+8/+10/+12V @250mA
TFC419	6-18	26	-	31	30	+5V @700mA
TFC426	2-8	13	2	21	19	+5V @52mA
TFC429	6-18	18	3	25.5	25	+5/+6/+7V @160mA
TFC437	DC-20	21	-	29.5	27.5	+8/+10/+12V @350mA
TFC444	1-12	16	1.6	20.5	18.5	+5V @45mA
TFC445	18-40	10.5	4	15	12	+5V@40mA
TFC447	18-40	20	2.5	17.5	16	+5V @69mA
TFC448	18-40	16	2.5	17.5	16	+5V @67mA
TFC454	18-50	17	4.5	17	16	+5V @87mA
TFC461	0.8-22	18	2.5	25.5	23.5	+8/+10/+12V@155mA
TFC462	2-18	21	2	24	21	+5/+6/+7V @120mA
TFC466	2-20	19.5	2.5	24	22	+7V @130mA

2.3 Gain Blocks

Part#	Frequency (GHz)	Gain(dB)	NF(dB)	OP1dB(dBm)	Power Supply
TFC180-2	0.01-2	23	1.5	23	+5V@95mA
TFC180-4B	0.03-4	32	0.6	19	+5V @92mA
TFC180-8A	0.03-4	18	1.3	21	+5V@61mA
TFC180-8L	0.02-4	16	2.0	22	+5V@100mA

Part#	Frequency (GHz)	Gain(dB)	NF(dB)	OP1dB(dBm)	Power Supply
TFC180-18	DC-4	19	4.0	14.5	+5V@40mA
TFC300-1	DC-4	16	3.5	15	+5V@40mA
TFC300-2	0.01-4	18	1.8	19	+5V @85mA
TFC300-14	0.1-3	23	1	20	+5V @50mA
TFC300-16	0.01-6	25 dB@90mA 24.5 dB@70mA	0.8	20.5 dBm@90mA 20 dBm@70mA	+5V @90mA (VG Floating) +5V @70mA (VG GND)
TFC300-15	0.02-4	23	1.0	20.5	+5V@58mA

TFC300-16A	0.03-6	22	1.0	20	+5V@60mA

3、Frequency Conversion

3.1 Mixers

Part#	RF/LO frequency (GHz)	IF Frequency (GHz)	Conversion Gain (dB)	LO/RF Isolation (dB)	IP1dB (dBm)
TFC518	18-40	DC-18	-10	30	11
TFC518M	18-40	DC-18	-10	30	11
TFC527	12-27	DC-13	-8	35	12
TFC527M	12-27	DC-13	-8	35	12
TFC536H	3-12	DC-4.5	-8	60	12
TFC536HM	3-12	DC-4.5	-8	60	12
TFC551	1.5-5	DC-3	-9	60	15
TFC554	6-26	DC-9	-9	40	16
TFC554M	6-26	DC-9	-9	40	16
TFC555	18-50	DC-22	-10	45	14
TFC541	6-20	DC-6	-8	40	12
TFC542	6-20	DC-6	-8	40	12
TFC550	0.5-2.5	DC-1	-10	45	13
TFC566L	6-26	DC-8	-10	30	12

3.2 Frequency Multipliers

Part#	Multiply Factor	Input frequency (GHz)	Output Frequency(GHz)	Conversion Loss(dB)	1xFin Leakage (dBc)
TFC578	2	8-20	16-40	12	40

4、Passive Components

4.1 Equalizers

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Return Loss (dB)
TFC131-4	1-18	4dB Equalizer	0.5	25
TFC131-6	1-18	6dB Equalizer	0.7	25

TFC131-8	1-18	8dB Equalizer	0.95	25
TFC131-8A	1-18	8dB Equalizer	0.95	25
TFC131-8B	1-18	8dB Equalizer	1.2	20
TFC131-12	1-18	12dB Equalizer	1.1	25
TFC133-4A	2-12	4dB Equalizer	0.5	25
TFC134-4A	6-18	4dB Equalizer	0.6	20
TFC134-2	6-18	2dB Equalizer	0.6	25
TFC134-4	6-18	4dB Equalizer	0.8	25
TFC134-12	6-18	12dB Equalizer	1.3	20
TFC136-6L	18-40	6dB Equalizer	1.0	20
TFC138-6	8-50	6dB Equalizer	0.8	18

4.2 Power Dividers

Part#	Frequency (GHz)	Function	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)
TFC149	0.8-8	2-Way	1.4	20	20
TFC150	0.5-2	2-Way	1.2	20	20
TFC151L	0.8-2	2-Way	0.7	20	15
TFC152L	2-8	2-Way	0.7	20	15
TFC153	1-18	2-Way	1.6	20	12
TFC154L	6-18	2-Way	0.6	20	15
TFC155	2-18	2-Way	0.9	20	15
TFC156	6-18	2-Way	0.7	22	14
TFC159	12-30	2-Way	0.9	20	15
TFC157L	18-40	2-Way	0.9	25	15

4.3 RF Filters

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Rejection (dB)	Return Loss (dB)
TFC170	2-20	High-pass	1	53@1.2GHz	20
TFC170-24	24-40	High-pass	2.2	30@21GHz	10
TFC170-2H	2-20	High-pass	1	40@1.2GHz	15
TFC170-5	5.5-26	High-pass	2.2	45@4.1GHz	20
TFC170-8	8-30	High-pass	2.4	38@6GHz	20
TFC170-20L	20-40	High-pass	2.2	39@16GHz	15
TFC170-30	30-50	High-pass	2	55@21GHz	15
TFC171-0.5	DC-0.5	Low-Pass	1.1	40@1.1GHz	20
TFC171-1	DC-1	Low-Pass	1.3	40@1.9GHz	25
TFC171-1.5	DC-1.5	Low-Pass	1.7	40@2.6GHz	18
TFC171-2.5	DC-2.5	Low-Pass	1.4	40@4.1GHz	18
TFC171-6	DC-6	Low-Pass	1.8	40@8GHz	20
TFC171-8	DC-8	Low-Pass	2	40@10.4GHz	20

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Rejection (dB)	Return Loss (dB)
TFC171-11	DC-11	Low-Pass	1.8	40@15.2GHz	20
TFC171-4	DC-4	Low-Pass	1.8	40@6.5GHz	25
TFC176	4.29-4.31	Band-stop	2.5	20	10
TFC177-4	4-6	Band-stop	3.5	40@3.0GHz	15
TFC178-10L	DC-10	Low-Pass	1.9	40@15.1GHz	20
TFC178	DC-18	Low-Pass	2.1	30@21GHz	10
TFC178-12L	DC-12	Low-Pass	2.8	40@16GHz	15
TFC178-20L	DC-20	Low-Pass	3.5	35@24.5GHz	15
TFC178-24	DC-24	Low-Pass	2.0	30@29.5GHz	15
TFC178-24L	DC-24	Low-Pass	2.0	30@31GHz	15
TFC178-26	DC-26	Low-Pass	1.5	20@31GHz	20
TFC178-32	DC-32	Low-Pass	1.2	30@44GHz	20

4.4 Limiters

Part#	Frequency (GHz)	Flat Leakage Power (dBm)	Power Handling (W)	Insertion Loss (dB)	Return Loss (dB)
TFC181-13A2	DC-2	15	125 (Pulse)	0.3	15
TFC181-1A	DC-18	16	3(CW)	0.4	20
TFC181-2A2	6-18	16.5	5(CW)	0.45	20
TFC181-3	6-18	18	10	0.55	18

4.5 Fixed Attenuators

Part#	Frequency (GHz)	Attenuation (dB)	Return Loss (dB)
TFC191-1L	DC-40	1	20
TFC191-2L	DC-40	2	20
TFC191-3L	DC-40	3	18
TFC191-4L	DC-40	4	18
TFC191-5L	DC-40	5	18
TFC191-6L	DC-40	6	18

Part#	Frequency (GHz)	Attenuation (dB)	Return Loss (dB)
TFC191-7	DC-40	7	16
TFC191-8L	DC-40	8	16
TFC191-9	DC-40	9	16
TFC191-10L	DC-40	10	16
TFC191-15L	DC-40	15	16
TFC191-20L	DC-40	20	25
TFC191-30L	DC-40	30	13
TFC191-102	DC-40	0/1/2	20
TFC191-204	DC-40	0/2/4	20
TFC191-305	DC-40	0/3/5	20
TFC193	DC-20	0/0.25/0.5/1d/1.5/2/2.5/3/3.5/3.75	20

4.6 Directional Couplers

Part#	Frequency (GHz)	Insertion Loss (dB)	Coupling (dB)	Return Loss (dB)
TFC162L	2-18	1.25	12	15

5、Power Control

5.1 FET Drivers

Part#	Description	Output Voltage(V)	Output Voltage (V)	Input Voltage (V)	Quiescent Current (mA)	Clock Frequency (MHz)
TFC160-1	1-Channel FET Driver	0	-5	5/0	1	30
TFC160-1H	1-Channel FET Driver	0	-4.8	5/0	1	10

5.2 Serial-to-Parallel Converters

Part#	Description	Output Voltage (V)	Output Voltage (V)	Input Voltage (V)	Quiescent Current (mA)	Clock Frequency (MHz)
TFC166-3	13-Bit Serial-to-Parallel Converter	5	0	0/2.5/3.3/5	0.1	10

6、Multi-Function Chips

6.1 Switched Filter Banks

Part#	Description	Frequency (GHz)	Insertion Loss (dB)	Voltage (V)
TFC664	7 Segment	0.8-18	9	0/-5V or 0/+5V
TFC667	7 Segment	1.9-18	9	0/+5V
TFC670	4 Segment	18-42.5	10	0/+5V

6.2 Bi-Directional Amplifiers

Part#	Frequency (GHz)	NF (dB)	Gain (dB)	OP1dB (dBm)	Power Supply
TFC651	2-20	2.5	21.5	15.5	+5V@65mA

6.3 Multi-Function Transceivers

Part#	Description	Frequency (GHz)	Gain Rx (dB)	Attenuation Range Rx(dB)	Phase Shift Range Rx(°)	Gain Tx(dB)	Phase Shift Range/Tx Mode (°)
TFC605	6-bit Attenuation/6-bit Phase Shifter	5-6	13.5	0.5-31.5	5.625-360	13.5	5.625-360

7、Frequency Generation

7.1 VCOs

Part#	Output Frequency(GHz)	Output Power (dBm)	SSB Phase Noise (dBc/Hz)	Power Supply
TFC592-3-W2123	7-12	10	-92, 100KHz Offset	+5V/+3.3V@60mA
TFC592-3-W2120	8-12	10	-92, 100KHz Offset	+5V/+3.3V@60mA
TFC592-3-M452	7.4-12.7	12	-95, 100KHz Offset	5V/@60mA
TFC592-3-W2121	7.5-13	10	-92, 100KHz Offset	+5V/+3.3V@60mA

MMIC Packaging Products

1、Control Products

1.1 RF Switches

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	P1dB (dBm)	Isolation (dB)	Control Voltage(V)	Package
TFC111LC4B	DC-20	反射式 SPDT	0.9	24	40	0/-5V	4×4 QFN24-Lead
TFC114LP3	DC-20	Absorptive/ SPDT	2	--	45	0/2.5/3.3/5	3X3 QFN16-Lead
TFC117LP4	0.1-8	Absorptive/ SPST	1.5	--	60	0/2.5/3.3/5	4X4 QFN16-Lead
TFC117LC4	0.1-8	Absorptive/ SPST	2	--	60	0/2.5/3.3/5	4X4 QFN16-Lead
TFC119LP3	0.1-20	Absorptive/ SPST	1.5	21.5	50	0/+5V	3×3 QFN16-Lead
TFC127LP3	0.1-20	Absorptive/ SPDT	2.5	--	40	0/+3.3V	3X3 QFN16-Lead
TFC127LC4	0.1-20	Absorptive/ SPDT	2.1	--	55	0/+5V	4X4 QFN19-Lead
TFC129-1LP3	DC-18	Reflective SPDT	1	--	40	0/-5V	3X3 QFN12-Lead
TFC129LP3	DC-18	Reflective SPDT	1.5	--	30	0/-5V	3X3 QFN12-Lead
TFC114-4DLC3	DC-4	Reflective SPDT	1.1	24.5	38	0/+5V	3X3 QFN 16-Lead
TFC127MLC4	0.1-20	Absorptive/ SPDT	2	--	50	0/+5V	4X4 QFN19-Lead
TFC120-6LC4	0.1-6	Absorptive/ SP4T	1.4	--	60	0/+5V	4X4 QFN24-Lead
TFC120-6LP3	0.1-6	Absorptive/ SP4T	1.3	22	55	0/+5V	3×3 QFN16-Lead
TFC116MPDLP4	DC-20	Absorptive/ SP4T	3	--	40	0/2.5/3.3/5	4X4 QFN24-Lead
TFC118-6MPDLP4	0.1-8	Absorptive/ SP8T	2	--	40	0/+5V	4X4 QFN24-Lead
TFC1001LP4	DC-8	Absorptive/ SPDT	0.9	36	60	0/2.5/3.3/5	4X4 QFN16-Lead
TFC1002LP4	0.1-6	Absorptive/ SPDT	0.8	35	60	0/2.5/3.3/5	4X4 QFN16-Lead
TFC1003LP4	DC-6	Absorptive/ SPDT	1.1	36	60	0/2.5/3.3/5	4×4 QFN16-Lead
TFC1004LP4	DC-6	Absorptive/ SPDT	0.9	36	60	0/2.5/3.3/5	4X4 QFN20-Lead
TFC1005LP4	0.1-6	Absorptive/ SPDT	0.8	35	50	0/2.5/3.3/5	4X4 QFN20-Lead
TFC1006LP4	DC-6	Absorptive/ SPDT	1.0	36	60	0/2.5/3.3/5	4X4 QFN20-Lead
TFC1010LP4	DC-6	Absorptive/ SP4T	1.5	35	40	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1015LP3	DC-13	Absorptive/ SPDT	1.1	36	40	0/2.5/3.3/5	3X3 QFN16-Lead

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	P1dB (dBm)	Isolation (dB)	Control Voltage(V)	Package
TFC1001DLP4	DC-8	Absorptive/ SPDT	0.9	--	60	0/2.5/3.3/5	4X4 QFN16-Lead
TFC1004DLP4	DC-6	Absorptive/ SP2T	1	36	60	0/2.5V ~ 5V	4X4 QFN20-Lead
TFC1015DLP3	DC-13	Absorptive/ SP2T	1.1	36	40	0/2.5 ~ 5/-2.5	3X3 QFN16-Lead
TFC1007LP4	DC-6	Absorptive/ SP2T	1.4	35	40	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1007DLP4	DC-6	Absorptive/ SP2T	1	35	50	0/2.5 ~ 5V	4X4 QFN24-Lead
TFC1009LP4	DC-6	Absorptive/ SP4T	1.4	35	40	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1009DLP4	DC-6	Absorptive/ SP4T	1.3	35	45	1.8V/2.5V/3.3V LVTTL，5V TTL	4X4 QFN24-Lead
TFC1011LP4	DC-6	Absorptive/ SP5T	1	35	50	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1013LP4	DC-6	Absorptive/ SP6T	1.2	34	50	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1013DLP4	DC-6	Absorptive/ SP6T	1.2	34	50	0/2.5V ~ 5V	4X4 QFN24-Lead
TFC1019LP4	DC-6	Reflective SPDT	0.8	42	40	0/2.5/3.3/5	4X4 QFN20-Lead
TFC1021LP4	DC-4	Absorptive/ SP8T	1.9	30	40	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1021MLP4	DC-4	Absorptive/ SP8T	1.9	30	40	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1021MDLP 4	DC-4	Absorptive/ SP8T	1.9	--	40	0/2.5/3.3/5	4X4 QFN24-Lead
TFC1022-11LP5	DC-6	Reflective SPDT	1.6	44.5	20	0/+5V	5X5 QFN32-Lead
TFC1025-1LP5	DC-6	Reflective SP4T	1.2	44.5	30	0/2.5/3.3/5	5X5 QFN32-Lead

1.2 Digital Step Attenuators

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Attenuation Range (dB)	Control Voltage (V)	Package
TFC232HLP3	0.1-18	1-bit Digital Attenuator	2	16	0/3.3/5	3X3 QFN16-Lead
TFC232HLC4	0.1-18	1-bit Digital Attenuator	0.9	16	0/+5	4×4 QFN-19Lead
TFC211HLC4	0.5-6	6-bit Digital Attenuator	2	0.5-31.5	0/+5	4X4 QFN24-Lead
TFC211HLP4	0.5 - 12	6-bit Digital Attenuator	2.0	0.5-31.5	0/+5	4×4 QFN24-Lead
TFC212LC5	0.1-18	6-bit Digital Attenuator	2.5	0.5-31.5	0 / +5	5×5 QFN14-Lead
TFC212LP4	0.1-12	6-bit Digital Attenuator	2	0.5-31.5	0 / +5	4×4 QFN24-Lead，
TFC241LPDLP4	DC-18	6-bit Digital Attenuator	4.5	0.5-31.5	0/3.3/5	4X4 QFN24-Lead
TFC2002LP4	DC-6	7-bit Digital Attenuator	2	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Attenuation Range (dB)	Control Voltage (V)	Package
TFC2001LP4	0.1-6	7-bit Digital Attenuator	1.4	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead
TFC2003LP4	DC-6	7-bit Digital Attenuator	3.1	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead
TFC2005LP4	DC-6	7-bit Digital Attenuator	1.4	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead
TFC2005LP4-J	DC-6	7-bit Digital Attenuator	1.4	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead
TFC2006LP4	DC-6	7-bit Digital Attenuator	2.7	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead
TFC2002DLP4	DC-6	7-bit Digital Attenuator	2	0.25-31.75	0/2.5～5/-2.5	4X4 QFN24-Lead
TFC2005DLP4	DC-6	7-bit Digital Attenuator	1.4	0.25-31.75	0/2.5～5/-2.5	4X4 QFN24-Lead
TFC2004LP4	0.1-6	7-bit Digital Attenuator	1.4	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead
TFC2004CLP4	0.1-6	7-bit Digital Attenuator	1.4	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead
TFC2008LP4	0.1-13	7-bit Digital Attenuator	2.8	0.25-31.75	0/2.5/3.3/5	4X4 QFN24-Lead

1.3 True Time Delays

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Delay Range (ps)	Delay Accuracy RMS (ps)	Control Voltage (V)	Package
TFC288LC5	0.1-18	5-bit	10	2.5-77.5	1.5	0/+5V	5×5 QFN14-Lead
TFC289ALC7	0.1-18	4-bit	16	40-600	±6	0/+5V	7×7 QFN26-Lead

1.4 Phase Shifters

Part#	Frequency (GHz)	Description	Insertion Loss (dB)	Phase Shift Range (°)	Control Voltage (V)	Package
TFC254LP4	0.8-1.4	6-bit	5	5.625-360	0/-5V	4X4 QFN24-Lead
TFC250LC4	1-2	4-bit	2.2	2-30	0/+5V	4×4 QFN24-Lead
TFC252LLC4	1.8–2.7	6-bit	4.0	360	0/+5	4×4 QFN24-Lead
TFC253LLC4	2.6-3.6	6-bit	4.5	5.625-360	0/+5 V	4×4 QFN24-Lead
TFC262LC5	2-6	6-bit	10.5	5.625-360	0/+5V	5×5 QFN32-Lead
TFC266LC7	0.8-2s	6-bit	9	5.625-360	0/+5V	7×7 QFN48 -Lead
TFC2101LP4	5.9-7.4	6-bit	5.8	5.625-360	0/+3V	4X4 QFN24-Lead

1.5 Temperature-variable Attenuators

Part#	Frequency (GHz)	Insertion Loss (dB)	Attenuation Compensation Range (dB)	Temperature Compensation Range (℃)	Return Loss (dB)	Package
TFC192-3LP3	DC-20	3.9	3	-55-+85	20	3X3 QFN16-Lead

1.6 Voltage Variable Attenuators

Part#	Frequency (GHz)	Insertion Loss (dB)	Attenuation Range (dB)	IP1dB (dBm)	Package
TFC2201LP3	0.001-6	3.0	0-30	17.5	3X3 QFN16-Lead

2、RF Amplifiers

2.1 Gain Blocks

Part#	Features	Frequency (GHz)	Gain (dB)	NF (dB)	P1dB (dBm)	Power Supply	Package
TFC300-14LP3	--	0.1-3	22	1.5	19.5	+5V@50mA	3X3 QFN16-Lead
TFC300-14ST89C	--	0.1-3	22	1	20	+5V@50mA	SOT-89
TFC300-1LP3	--	DC-4	16	3.5	16	+5V@40mA	3X3 QFN16-Lead
TFC180-18LC3	Low Phase Noise	DC-4	18	4.5	14	+5V@40mA	3X3 QFN16-Lead
TFC300-1LC3B	--	DC-4	16	3.5	15	+5V@40mA	3X3 QFN16-Lead
TFC300-1ST89	--	DC-4	15	3.5	14.5	+5V@40mA	SOT-89
TFC300-1ST89C	--	DC-4	15	4	14.5	+5V@40mA	SOT-89
TFC180-1ST89	--	0.005-4	19	2.5	19.5	+5V@50mA	SOT-89
TFC180-1ST89C	--	0.005-4	19	1.5	20	+5V@50mA	SOT-89
TFC300-2LP3	--	0.01-4	17	2	18	+5V@85mA	3X3 QFN16-Lead
TFC300-2LC3	--	0.01-4	18	2	18	+5V@85mA	3X3 QFN16-Lead
TFC300-2ST89	--	0.01-4	17	2	18.5	+5V@85mA	SOT-89
TFC300-15LC3	--	0.02-4	23dB@58mA 22dB@38mA	1	20.5dBm@58 mA 19dBm@38mA	+5V@58mA (VG floating) +5V@38mA (VG grounded)	3X3 QFN16-Lead
TFC300-15LP3	--	0.02-4	23dB@58mA 22dB@38mA	1	21dBm@58mA 19dBm@38mA	+5V@58mA (VG floating) +5V@38mA (VG grounded)	3X3 QFN16-Lead
TFC180-4BLP3	--	0.03-4	32	0.7	18	+5V@92mA	3X3 QFN16-Lead
TFC180-8ALC3	--	0.03-4	17 dB@61mA 16.5 dB@37mA	1.3	20dBm@61mA 18.5dBm@37 mA	+5V@61mA (VG floating) +5V@37mA (VG grounded)	3X3 QFN16-Lead

Part#	Features	Frequency (GHz)	Gain (dB)	NF (dB)	P1dB (dBm)	Power Supply	Package
TFC180-4BLC3	--	0.03-4	32	1.1	19	+5V@92mA	3X3 QFN16-Lead
TFC180-8LC3	--	0.03-4	15.5	2.3	21	+5V@105mA	3X3 QFN16-Lead
TFC180-8LP3	--	0.03-4	16	2.3	21	+5V@105mA	3X3 QFN16-Lead
TFC180-8ST89C	--	0.03-4	15	2.8	20.5	+5V@105mA	SOT-89
TFC300-16LC3	--	DC-6	24 dB@76mA 23.5 dB@58mA	0.9	20dBm@76mA 19.5dBm@58 mA	+5V@76mA (VG floating) +5V@58mA (VG grounded)	3X3 QFN16-Lead
TFC180-21LC3	--	0.01-6	13.5	7	16	+5V@95mA	3X3 QFN16-Lead
TFC300-16LP3	--	0.03-6	24dB@76mA 23.5dB@58mA	1	20dBm@76mA 19.5dBm@58 mA	+5V@76mA (VG floating) +5V@58mA (VG grounded)	3X3 QFN16-Lead
TFC300-16ALC3	--	0.03-6	21.5 dB@60mA 21 dB@40mA	1	20dBm@60mA 19dBm@40mA	+5V@60mA	3X3 QFN16-Lead
TFC180-17LP3	Low Phase Noise	DC–12	12	5.5	13	+5V @ 50mA	3X3 QFN16-Lead
TFC180-25LC3	--	0.1-2	21	1	22	+5V@98mA	3×3 QFN-16Lead
TFC180-2LP3	--	0.01-2	22.5	1.6	22.5	+5V@95mA	3×3 QFN16-Lead
TFC180-4LP3	--	0.1-3.5	30	1.3	19	+5V@100mA	3X3 QFN16-Lead
TFC180-8ALP3	--	0.03 - 4	17	1.4	20.5	+5V@61mA	3X3 QFN16-Lead
TFC180-9LC3	--	0.01-4	23	1.4	20	+5V@90mA	3X3 QFN16-Lead
TFC180-9LP3	--	0.01-4	23	1.4	20	+5V@90mA	3X3 QFN16-Lead
TFC300-14ALC3	--	0.01-4	21	1.3	20.5	+5V@49mA	3× 3 QFN-16Lead
TFC300-14ALC3B	--	0.01-4	21	1.3	20.5	+5V@49mA	3× 3 QFN-16Lead
TFC300-14LC3	--	0.1-3	22.5	1.2	19.5	+5V@50mA	3×3 QFN16-Lead
TFC300-16ALP3	--	0.03- 6	21.5	1.0	20	+5V@60mA	3×3 QFN16-Lead
TFC300-18ST89C	--	0.01-4	17.5	1.7	+15.5	+5V@40mA	SOT89

2.2 Low Noise Amplifiers

Part#	Frequency (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	Power Supply	Package
TFC332LC4	0.7-2.5	28	0.6	16	+5V@62mA	3X3 QFN16-Lead
TFC301-1LP3	0.5-4	17	2.3	19.5	+5V@85mA	3X3 QFN16-Lead
TFC329HLP3	2-8	27	1.2	13	+5V@37mA	3X3 QFN12-Lead

Part#	Frequency(GHz)	Gain(dB)	NF(dB)	OP1dB(dBm)	Power Supply	Package
TFC364LP3	0.8-18	15	1.9	17.5	+5V@45mA	3X3 QFN16-Lead
TFC363LP3	2-18	24	1.4	13	+5V@37mA	3X3 QFN16-Lead
TFC180-5LC4	0.4-4	29	1.7	17.5	+5V@55mA	4X4 QFN16-Lead
TFC180-5LP3	0.4-4	29	2	16	+5V@55mA	3X3 QFN12-Lead
TFC309LC4	1-9	24.5	1	+15	+5V@65mA	4×4 QFN19- Lead
TFC314LC4	6-28	22	4	16.5	+5V@77mA	4×4 QFN-8Lead
TFC320LP3	6-18	22	1,6	13	+5V@28mA	3×3 QFN-16Lead
TFC329LC5	2-6	25	1	+12	+5V@26mA	5× 5 QFN14-Lead
TFC332LP3	0.7-2.5	28.5	0.6	16	+5V@62mA	3X3 QFN12-Lead
TFC343LC4	18-40	13.5	3	12	+5V@27mA	4×4 QFN8 -Lead
TFC363LLC4	2-18	24	1.5	12.5	+5V@37mA	4X4 QFN19-Lead
TFC364LC4	0.8-18	15.5	2.4	17.5	+5V@45mA	4×4 QFN19-Lead

2.3 Medium Power Amplifiers

Part#	Frequency (GHz)	Gain (dB)	NF (dB)	Saturated Power (dBm)	OP1dB (dBm)	Power Supply	Package
TFC406LP3	1-10	19.5	1.5	21	19.5	+5V@65mA	3 × 3 QFN16 -Lead
TFC426LC4	2-8	12	2.4	20.5	18.5	+5V@52 mA	19Lead，4mm×4mm QFN
TFC429LC4	6-18	18	3.5	25	23	+5/+6/+7V	4 × 4 QFN-19Lead
TFC447LC4	18-40	19	4	16	14.5	+5V@72mA	4 × 4 QFN8 -Lead
TFC461LC7	0.8-22	17	3	24.5	22.5	+8/+10/+12 V@155mA/165 mA/175mA	7 × 7 QFN26 -Lead
TFC464LC4	0.8-18	11	2.3	25.5	24.5	+12V@120mA	19Lead，4mm×4mm QFN
TFC180-13LC4	0.02-6	20	1.5	28.5	28	+5/8/10V@125mA	4X4 QFN19-Lead
TFC400-1ALP4	0.03-6	19.5	1.8	29	28	+12V/10V/8V@135mA	4×4 QFN16-Lead

2.5 GaN Power Amplifiers

Part#	Frequency(GHz)	Output Psat(dBm)	Gain(dB)	Efficiency(%)	Operating Voltage (V)	Package
TFC704LC5	2.0-2.6	42	25.5	58	+28	5X5 QFN14-Lead
TFC704FL	2.0-2.6	42	25.5	58	+28	Ceramic/Metal Flange

3、Frequency Conversion

3.1 RF Mixers

Part#	RF/LO frequency (GHz)	IF Frequency(GHz)	Conversion Gain (dB)	LO/RF Isolation (dB)	IP1dB (dBm)	Package
TFC550LP4	0.5-2	DC-1	-10	45	13	4X4 QFN24-Lead
TFC550LC4	0.5-2.5	DC-1	-10	45	13	4X4 QFN24-Lead
TFC551LP4	1.5-5	DC-3	-9	60	14.5	4X4 QFN24-Lead
TFC551LC4	1.5-5	DC-3	-9	55	14.5	4X4 QFN24-Lead
TFC551MLP4	1.5-5	DC-3	-9	55	14.5	4X4 QFN24-Lead
TFC536HLP3	3-12	DC-4	-9	60	12	3X3 QFN12-Lead
TFC536HMLP3	3-12	DC-4	-9	60	12	3X3 QFN12-Lead
TFC566LLP3	6-26	DC-8	-12	30	12	3X3 QFN12-Lead
TFC520LP4	5-13	DC-4	-10	56	17	4×4 QFN24-Lead
TFC536HLC4	3-12	DC-4.5	-8.5	60	12	4×4 QFN19 -Lead
TFC550LC4M	0.5-2.5	DC-1	-10.5	45	13	4×4 QFN24-Lead
TFC550LP4M	0.5-2.5	DC-1	-10	45	13	4×4 QFN24-Lead
TFC510ALP3	0.01-13	0.01-4	-3.5	50	3	3X3 QFN12-Lead

3.2 Frequency Multipliers

Part#	Function	Input frequency (GHz)	Output Frequency(GHz)	Conversion Loss (dB)	Output Power (dBm)	Fo Isolation (dBc)
TFC573LLC4	Multiply Factor	4-8	8-16	13	--	45

4、Passive Components

4.1 Equalizers

Part#	Frequency (GHz)	Slope (dB) Typ.	Insertion Loss (dB)	Return Loss (dB)	Package
TFC132-4LP3	2-6	4	1.1	20	3X3 QFN12-Lead
TFC133-4ALC4	2-12	4	1	20	4×4 QFN19-Lead

Part#	Frequency (GHz)	Slope (dB) Typ.	Insertion Loss (dB)	Return Loss (dB)	Package
TFC133-4ALP3	2-12	4	0.8	20	3X3 QFN12-Lead
TFC134-12LP2	6-18	12	1.8	15	2×2 DFN-6Lead
TFC139-4LC3	0.2-2	4	0.6	20	3×3 QFN-16Leads

4.2 Power Dividers

Part#	Frequency (GHz)	Function	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Package
TFC150LC4	0.5-2	2-Way	1.2	20	20	4X4 QFN16-Lead
TFC151LLC4	0.8-2	2-Way	1	20	20	4X4 QFN16-Lead
TFC151LP3	1-3	2-Way	1.2	18	20	3X3 QFN16-Lead
TFC151LC4	1-3	2-Way	1.2	18	20	4X4 QFN16-Lead
TFC152HLP3	2-6	2-Way	1	20	20	3X3 QFN16-Lead
TFC152LLC4	2-8	2-Way	1.2	18	12	4X4 QFN19-Lead
TFC153LC5	1-18	2-Way	1.6	20	15	5X5 QFN14-Lead
TFC159LP3	12-26	2-Way	1	20	15	3X3 QFN16-Lead
TFC152HLC3	2-6	2-Way	0.8	20	20	3X3 QFN16-Lead
TFC154-3LC4	6-18	2-Way	1.8	20	18	4× 4 QFN-6 Lead
TFC154-3LP4	6-18	2-Way	1.5	20	15	4×4 QFN-24 Lead
TFC154HLC3	6-18	2-Way	0.7	25	15	3×3 QFN-5Lead
TFC154LLC4	6-18	2-Way	1.5	20	12	4×4 QFN-19Lead
TFC157LC4	18-40	2-Way	1.8	15	12	4×4 QFN-24Lead
TFC157LLP3	18-40	2-Way	1.5	25	12	3×3 QFN-16 Lead

4.3 RF Filters

Part#	Frequency (GHz)	Function	Insertion Loss (dB)	Rejection (dB)	Return Loss (dB)	Package
TFC170-20LP3	20–40	High-pass filter	2.5	≥ 18 dB @ 16.2GHz; ≥28dB @ 15.4GHz	10	3X3 QFN12-Lead
TFC170-16HLP3	16-28	High-pass filter	2.5	27@14GHz	15	3X3 QFN12-Lead

4.4 Limiters

Part#	Frequency (GHz)	Output Power Limit (dBm)	Power Handling (W)	Insertion Loss (dB)	Return Loss (dB)	Package
TFC3001LP3	DC-6	6-13	10	1.2	15	3X3 QFN12-Lead
TFC3002LP3	DC-6	27-33	20	1.2	10	3X3 QFN12-Lead
TFC181-10LLC4	1-2	16	50	0.5	23	4X4 QFN24-Lead
TFC181-7ALC4	1-6	16	10	0.5	20	4X4 QFN24-Lead
TFC181-1ALC4	DC - 18	16	3	0.8	15	4×4 QFN19-Lead
TFC181-13A2LC4	DC-2	15	125(Pulse)	0.35	22	4×4 QFN24-Lead

5、Power Control

5.1 FET Drivers

Part#	Description	Voh (V)	Vol (V)	Input Voltage (V)	Quiescent Current (mA)	Clock Frequency(MHz)
TFC160-1BS8E	1-bit FET Driver Complementary Output	0	-5	5/0	0.1	30
TFC160-1S8E	1-bit FET Driver Complementary Output	0	-5	5/0	0.4	30
TFC160-8LP4	6-bit FET Driver Complementary Output	0	-5	5/0	1.5	30

5.2 Serial-to-Parallel Converters

Part#	Description	Voh (V)	Vol (V)	Input Voltage (V)	Quiescent Current(mA)	Clock Frequency (MHz)	Package
TFC166-3LP4	13-bit Serial-Parallel Converter	5	0	0/2.5/3.3/5	0.1	10	4X4 QFN24-Lead
TFC166-3LC5	13-bit Serial-Parallel Converter	5	0	0/2.5/3.3/5	0.1	10	5X5 QFN32-Lead

6、Multifunctional

6.1 Switched Filter Banks

Part#	Frequency (GHz)	Function	Insertion Loss (dB)	Voltage (V)	Package
TFC684LC5	5-13	RF Switch Filter	10	-5V@6mA	5X5 QFN14-Lead

7、Frequency Generation

7.1 VCOs

Part#	Output Frequency(GHz)	Output Power (dBm)	SSB Phase Noise (dBc/Hz)	Power Supply	Package
TFC592-3-W2121LC4	7.5-13	10	-92, 100KHz Offset	+5V/+3.3V@60mA	4X4 QFN24-Lead

7.2 Dividers

Part#	Output Frequency(GHz)	Functionality	Input Power (dBm)	Output Power (dBm)	SSB Phase Noise (dBc/Hz)	Power Supply	Package
TFC595-5CLC4	0.1-12	÷8 Divider	-20 ~ +15	-1.5	-162	+5V@110mA	4X4 QFN24-Lead
TFC595-7LC4	0.1-12	÷16 Divider	-25 ~ +15	0.5	-150	+5V/+3V@90 mA	4X4 QFN24-Lead

System-in-Package Products

1、Switched Filter Banks SiP

Part#	Name	Frequency (GHz)	Insertion Loss (dB)	Input P1dB (dBm)	Passband Bandwidth (GHz)	Stopband Rejection (dBc)	Package
TFC9101LC2015	16 - segment Frequency Switch Filter Bank	0.957-1.2271	8	20	0.02	40 (f0±30MHz	20X15 SMD11-Lead
TFC9102LC1412	16 - segment Switch Filter Bank	0.957-1.2271	8	20	0.02	40 (f0±30MHz)	14X12 BGA

2、RF Front-End SiP

Part#	Name	Frequency (GHz)	Gain (dB)	NF (dB)	Output P1dB (dBm)	Max power handling (W)	Package
TFC9611LC5	RF Front-End	1.258-1.278	30	1.5	18	10	5X5 QFN32-Lead
TFC9616LC5	RF Front-End	1.258-1.278	31	1.0	18.5	10	5X5 QFN32-Lead
TFC9313LC7	Amplification and Bypass Multifunctional Module	6-18	20.5	2.5	13	—	7X7 QFN26-Lead
TFC9314LC5	Harmonic Suppression Amplifier Module	0.45-0.75	22	0.9	17	—	5X5 QFN14-Lead
TFC9624LC6	Navigation RF Front-End	2.492±0.008	28	1.7	14	70mA@+5V/40mA@+3.3V	6X6 QFN40-Lead
TFC9630LC6	Navigation RF Front-End	2.492±0.008	29	1.2	14	70mA@+5V/40mA@+3.3V	6X6 QFN40-Lead
TFC9653LC5	Navigation RF Front-End	1.258–1.278	30	1.7	16.5	50 mA @+5 V	5×5 QFN-32 Lead

3、Limiting Low-Noise Amplification Module

Part#	Name	Frequency (GHz)	Gain (dB)	NF (dB)	Output P1dB (dBm)	Tolerable Power (W)	Package
TFC9306LC7	Limiting Low-Noise Amplifier	0.5-2	38	1	20	3	7X7 QFN26-Lead
TFC6301LC7	Limiting Low-Noise Amplifier	1-4	32	1.2	19	10	7X7 QFN22-Lead
TFC9307LC7	Limiting Low-Noise Amplifier	4-8	39	1.1	16	3	7X7 QFN26-Lead
TFC9315LC7	Limiting Low-Noise Amplifier	1-6	24.5	10	1.6	15.5	7X7 QFN26-Lead

4、Attenuation and Amplification

Part#	Name	Frequency (GHz)	Gain (dB)	NF (dB)	Output P1dB (dBm)	Attenuation Range (dB)	Package
TFC9201LC7	Voltage Controlled Attenuation and Amplification Module	0.1-2	28.5	—	19	0～30	7X7 QFN26-Lead
TFC9202LC7	Digital Controlled Attenuation and Amplification Module	0.1-2	29.5	—	19	0.5～31.5	7X7 QFN26-Lead
TFC9203LC7	Digital Controlled Attenuation and Amplification Module	4-8	21	—	16	0.5～31.5	7X7 QFN26-Lead
TFC9217LC7	Digital Controlled Attenuation, Temperature-Compensated Amplification and Multifunctional Module	2-8	23	—	10	0.5-31.5	7X7 QFN26-Lead
TFC9218LC7	Digital Controlled Attenuation, Temperature-Compensated Amplification and Multifunctional Module	0.5-4	18	—	17	0.5-31.5	7X7 QFN26-Lead
TFC6001LC5	Variable Gain Amplifier	0.03-1	--	30	19	0.3-31.5	5.2X5.2 QFN32-Lead
TFC9212LC7	Digitally Controlled Attenuation & Amplification Module	1-18	--	12	15	0.5-31.5	7X7 QFN26-Lead
TFC9213LC7	Digitally Controlled Attenuation & Amplification Module	0.5-4	6 位	26	19	0.5-31.5	7X7 QFN26-Lead

5、Upconverter/Downconverter SiP

Part#	Name	RF Frequency (GHz)	IF Frequency (GHz)	Conversion Gain (dB)	Output P1dB (dBm)	LO Input Power (dBm)	Package
TFC9505LC7	Upconverter SiP	4-9	0.1-2	5	—	3	7X7 QFN26-Lead
TFC9503LC7	Downconverter SiP	0.5-2	0.01-0.5	6	15	3	7X7 QFN26-Lead
TFC9504LC9	Downconverter SiP	4-9	0.1-2	5.5	15	3	9X9 QFN20-Lead
TFC9512LC2116	Downconverter SiP	0.8-18	1.3-2.3	30	10	5	21X16 BGA
TFC9514LC7	Multifunctional Frequency converter SiP	12-27	DC-3	-12	3	-4	7X7 QFN26-Lead
TFC9515LC7	Multifunctional Frequency converter SiP	3-12	DC-4.5	-12	2	3	7X7 QFN26-Lead
TFC9509LC2116	Upconverter SiP	0.8-18	1.3-2.3	33	13	0	21X16 BGA
TFC9508LC2116	Downconverter SiP	0.8-18	1.3-2.3	33	6	3	21X16 BGA
TFC9510LC9	Frequency converter SiP	20-23	DC-3	5	-5	40	7X7 QFN26-Lead
TFC9511LC7	Frequency converter SiP	20-23	2-18	-18	16	50	9X9 QFN34-Lead

6、Phase and Amplitude Control Multi-function SiP

Part#	Name	Frequency (GHz)	Gain (dB)	Output P1dB (dBm)	Attenuation Range (dB)	Phase Shift Range (°)	Package
TFC9210LC9	Phase and Amplitude Control Multifunctional Module	0.85-1.25	-8	15.5	0.5-31.5	360	9.3X9.3 QFN34-Lead
TFC9601LC9	Phase and Amplitude Control Multifunctional Module	2.7-3.5	7.5	18	0.25-31.75	360	9.3X9.3 QFN34-Lead
TFC9223LC9	Amplitude-Phase Control Multifunction Module	2-6	11	0.5-31.5	5.625-354.375	360	9.3X9.3 QFN34-Lead
TFC9618LC9	S-Band Receive Module	2-2.7	20/44	5/18	--	360	9.3X9.3 QFN34-Lead
TFC9619LC9	S-Band Receive Module	2-2.7	20/44	5/18	--	360	9.3X9.3 QFN34-Lead

7、Transceiver SiP

Part#	Name	Frequency (GHz)	Gain (dB)	Output P1dB (dBm)	Phase Shift Range (°)	Package
TFC9620LC2116	Four - Channel Transmit Module	1.8-2.7	23.5	14.5	360	21X16 BGA
TFC9632LC2116	Four - Channel Transmit Module	1.8-2.7	24	14	360	21X16 BGA
TFC9103LC5	Switch Multifunctional Module	0.35-2	-1/~5	20	—	5X5 QFN32-Lead

RF/Microwave Modules

1、RF AMPLIFIER

1.1 Low Noise Amplifiers

Part#	Frequency (GHz)	Gain (dB)	Gain Flatness(±dB)	Noise Figure(dB)	Output P1dB(dBm)	VSWR (In/Out)	Interface
TFC28060002	0.1-18	12	2.0	2.8	12	2	SMA-Female
TFC28060003	0.1-18	30	2.0	2.5	16	2.0	SMA-Female
TFC28060004	1-2	40	-	1.3	20	1.6	SMA-Female
TFC28060005	1-2	52	0.5	1.5	16	1.3	SMA-Female
TFC28060006	2-8	35	0.5	0.8	15	1.6	SMA-Female
TFC28060007	2-18	40	2.0	1.5	20	2	SMA-Female
TFC28060008	2-20	30	2.25	2.7	10	2.3	SMA-Female
TFC28060009	4-8	26	1.0	0.7	10	1.5	SMA-Female
TFC28060010	4-8	45	1.0	0.9	16	2.0	SMA-Female
TFC28060011	6-18	28	2.0	2	17	2.0	SMA-Female
TFC28060012	6-18	39	2.0	2	20	2.0	SMA-Female
TFC28060013	8-12	32	1.5	1	12	1.5	SMA-Female
TFC28060014	8-12	32	1.5	1.5	15	2.0	SMA-Female
TFC28060015	18-40	25	2.5	3	15	2..2	2.92mm-Female
TFC28060016	18-40	36	2.5	3	15	2.2	2.92mm-Female
TFC28060017	0.1-18	22	0.8	3	10	2.0	SMA-Female
TFC28060018	0.8-18	14	1.5	2	15	2.0	SMA-Female
TFC28060019	14-40	15	1.0	3.5	15	2.0	2.92mm-Female

1.2 Power Amplifiers

Part#	Frequency (GHz)	Gain(dB)	Gain Flantness(±dB)	Output P1dB(dBm)	Output Psat(dBm)	VSWR (IN/OUT)	Interface
TFC28070003	2-6	23	1.5	-	28	2.0	SMA-Female
TFC28070004	2-6	42	1.5	-	28	2.0	SMA-Female
TFC28070005	2-20	19	1.5	20	22	2.0	SMA-Female
TFC28070006	0.5-6	40	2.5	38	40	1.5	SMA-Female
TFC28070007	0.38-6	35	2.5	35	37	1.5	SMA-Female
TFC28070008	1.5-2.5	43	1.5	36	37	1.5	SMA-Female
TFC28070009	22-4	43	2.0	34	37	1.5	SMA-Female
TFC28070010	0.03-2.5	43	1.5	-	40	1.5	SMA-Female
TFC28070011	0.4-18	30	1.5	27	29	2.2	SMA-Female
TFC28070012	0.5-6	35	2.5	30	30	2.0	SMA-Female
TFC28070013	0.5-8	35	3.0	-	33	1.5	SMA-Female
TFC28070014	0.1-2	20	0.5	27	-	1.5	SMA-Female
TFC28070015	0.1-2	30	0.5	30	-	1.5	SMA-Female
TFC28070016	0.1-4	45	3.0	40	41	1.8	SMA-Female
TFC28070017	1-2	40	1.0	44	45	1.3	SMA-Female
TFC28070018	1-6	43	3.0	40	43	1.5	SMA-Female
TFC28070019	2-6.2	45	3.0	-	45	2.0	SMA-Female
TFC28070020	3-6	40	2.0	40.5	41	1.5	SMA-Female
TFC28070021	0.3-2	50	3.0	-	50	2.0	SMA-Female
TFC28070022	0.4-2	50	1.8	-	50	1.5	SMA-Female
TFC28070023	0.5-3	47	3.0	-	47	1.8	SMA-Female
TFC28070024	1-2	50	1.0	46	50	1.5	SMA-Female
TFC28070025	2-6	47	0.3	-	47	2.0	SMA-Female

1.3 Ultra-Wideband Chassis-Mounted Power Amplifiers

Part#	Frequency (GHz)	Gain(dB)	Gain Flantness (±dB)	Output P1dB (dBm/Watts)	Output Psat (dBm/Watts)	VSWR (IN/OUT)	Interface
TFC28050026	0.5-2.5	60	3.0	-	60	1.5	N/7/16 DIN/SMA-Female
TFC28050027	0.5-2	57	3.5	-	57	2.0	N/L29/SMA-Female
TFC28050028	2-4	57	3.0	200	500	1.5	N/7/16-Female

2、RF SWITCH

2.1 RF Mechanical Switches

Part#	Frequency (GHz)	Interface	RF Impedance	Working Mode	Switching Speed（ms）	Supply Voltage
TFC29650002	DC-40	2.92mm-Female	50	Failsafe	15	12/24/28
TFC29650003	DC-18	SMA-Female	50	Failsafe	15	12/24/28
TFC29650004	DC-12.4	SMA-Female	50	Latching	15	12
TFC29650005	DC-50	2.4mm-Female	50	Failsafe	15	12/24/28
TFC29650006	DC-40	2.92mm-Female	50	Failsafe	15	12/24/28
TFC29650007	DC-18	SMA-Female	50	Failsafe	15	12/24/28
TFC29650008	DC-40	2.92mm-Female	50	Failsafe	15	12/24/28
TFC29650009	DC-18	SMA-Female	50	Failsafe	15	12/24/28
TFC29650010	DC-18	SMA-Female	50	Latching	15	12/24/28
TFC29650011	DC-40	2.92mm-Female	50	Norm. Open	15	12/24/28
TFC29650012	DC-18	SMA-Female	50	Norm. Open	15	12/24/28
TFC29650013	DC-26.5	2.92mm-Female	50	Norm. Open	15	12/24/28
TFC29650014	DC-18	SMA-Female	50	Norm. Open	15	12/24/28

Part#	Frequency (GHz)	Interface	RF Impedance	Working Mode	Switching Speed (ms)	Supply Voltage
TFC29650015	DC-40	2.92mm-Female	50	Norm. Open	15	12/24/28
TFC29650016	DC-18	SMA-Female	50	Latching	15	12/24/28
TFC29650017	DC-40	2.92mm-Female	50	Norm. Open	15	12/24/28
TFC29650018	DC-18	SMA-Female	50	Norm. Open	15	12/24/28

2.2 Absorptive Solid State Switches

Part#	Frequency (GHz)	Way	Insertion Loss(dB)	VSWR (IN/OUT)	Speed(ns)	Power Handling(dBm)	Interface
TFC29650019	0.4-6	SPDT	2.0	1.2	100	28	SMA-Female
TFC29650020	0.8-18	SPDT	4.5	2.0	25	27	SMA-Female
TFC29650021	0.1-18	SP4T	3.5	2.0	50	27	SMA-Female
TFC29650022	0.5-40	SP4T	6.0	2.0	100	25	2.92mm-Female
TFC29650023	6-18	SP4T	2.0	1.5	25	27	SMA-Female
TFC29650024	0.5-40	SP6T	9.0	2.0	10	25	2.92mm-Female
TFC29650025	0.1-18	SP8T	4.0	2.0	100	30	SMA-Female
TFC29650026	0.5-40	SPDT	3.0	2.8	60	23	2.92mm-Female
TFC29650027	1-6	SPDT	2.0	2.2	200	200(W)	N-Female
TFC29650028	1-20	SPDT	4.0	1.5	50	30	SMA-Female

3、RF PHASE SHIFTER

3.1 Digital Phase Shifters

Part#	Frequency (GHz)	Insertion Loss(dB)	Control Bit TTL(Bits)	Attenuation Step(°)	Phase Range(°)	Phase Accuracy(±°)	VSWR (:1)	Power (dBm)	Interface
TFC29730002	1-4	17	6	5.625	360	±4.0	2.0	25	SMA-Female
TFC29730003	2-18	22	6	5.625	360	±3.0	2.0	25	SMA-Female

Part#	Frequency (GHz)	Insertion Loss(dB)	Control Bit TTL(Bits)	Attenuation Step(°)	Phase Range(°)	Phase Accuracy(±°)	VSWR (:1)	Power (dBm)	Interface
TFC29730004	6-18	10	6	5.625	360	±4.0	1.8	27	SMA-Female
TFC29730005	8-12	10	8	1.4	360	±5.0	2.0	25	SMA-Female
TFC29730006	18-40	17	6	5.625	360	±10.0	2.2	25	2.92mm-Female

3.2 Voltage-Controlled Phase Shifters (VCPS)

Part#	Frequency (GHz)	Insertion Loss(dB)	Phase Range(°)	Phase Flatness(t°)	VSWR (:1)	Power Supply (V)	Power (dB)	Interface
TFC29730007	0.5-1	4	360	-	2.0	+15	27	SMA-Female
TFC29730008	4-8	6	360	12	2.5	0/+10	27	SMA-Female
TFC29730009	8-18	7	360	±15	2.5	0/+13	20	SMA-Female

4、COAXIAL POWERDIVIDER

4.1 2-Way Power Dividers

Part#	Frequency (GHz)	Insertion Loss (dB)	VSWR (:1)	Isolation(dB)	Amplitude Balance (dB)	Phase Balance (°)	Power Handling(W)	Interface
TFC29680029	2-12.4	1.2	1.5	18	0.4	5	20	N-Female
TFC29680030	2-8	1.2	1.5	18	-	-	30	N-Female
TFC29680031	0.4-18	1.3	1.8	15	0.5	5	5	SMA- Female
TFC29680032	6-18	1.0	1.5	18	0.5	5	30	SMA-Female
TFC29680033	18-43.5	1.5	1.7	16	0.4	5	20	2.92mm-Female

4.2 3-Way Power Dividers

Part#	Frequency (GHz)	Insertion Loss (dB)	VSWR (:1)	Isolation(dB)	Amplitude Balance (dB)	Phase Balance (°)	Power Handling(W)	Interface
TFC29680034	0.4-6	1.3	1.5	18	0.9	9	20	N-Female
TFC29680035	2-6	1.3	1.4	20	0.5	7	30	SMA-Female
TFC29680036	2-18	1.9	1.45	18	0.5	5	30	SMA-Female
TFC29680037	8-20	1.6	1.6	17	0.8	7	30	SMA-Female
TFC29680038	18-40	2.1	1.8	20	0.7	8	20	2.92mm-Female

4.3 4 Way Power Dividers

Part#	Frequency (GHz)	Insertion Loss (dB)	VSWR (:1)	Isolation (dB)	Amplitude Balance (dB)	Phase Balance (°)	Power Handling (W)	Interface
TFC29680041	0.4-18	2.6	2.4	15	0.9	12	5	SMA-Female
TFC29680042	1-20	3.0	1.75	15	0.6	7	20	SMA-Female
TFC29680039	0.4-6	2.0	1.3	-	0.4	4	40	SMA-Female
TFC29680040	2-8	1.2	1.4	20	0.4	5	50	SMA-Female
TFC29680043	18-40	1.8	1.8	16	0.5	7	20	2.92mm-Female

4.5 5-Way Power Dividers

Part#	Frequency (GHz)	Insertion Loss (dB)	VSWR	Isolation (dB)	Amplitude Balance (dB)	Phase Balance (°)	Power Handling(W)	Interface
TFC29680044	10.5-14.5	1.6	1.6	18	±0.6	±7	30	SMA-Female
TFC29680045	13-14	1.2	1.5	18	±0.6	±5	30	SMA-Female
TFC29680046	35-36	3.0	2.0	12	±1.8	±15	20	2.92mm-Female

4.6 6-Way Power Dividers

Part#	Frequency (GHz)	Insertion Loss (dB)	VSWR	Isolation(dB)	Amplitude Balance (dB)	Phase Balance (°)	Power Handling (W)	Interface
TFC29680047	0.3-2	3.5	1.6	16	-	-	30	SMA-Female
TFC29680048	2-8	1.9	1.5	18	±0.9	±10	10	SMA-Female
TFC29680049	4-8	1.6	1.6	16	±0.8	±8	30	SMA-Female
TFC29680050	2-18	2.2	1.8	16	±0.7	±7	30	SMA-Female
TFC29680051	8-30	2.2	1.7	16	±1.2	±12	20	2.92mm-Female

4.7 8-Way Power Dividers

Part#	Frequency (GHz)	Insertion Loss (dB)	VSWR	Isolation (dB)	Amplitude Balance (dB)	Phase Balance (°)	Power Handling (w)	Interface
TFC29680052	0.2-6	6.5	1.7	17	±1.0	±10	30	SMA-Female
TFC29680053	2-8	2.0	1.6	17	±0.7	±8	30	SMA-Female
TFC29680054	2-18	4.0	1.9	15	±1.0	+8	30	SMA-Female
TFC29680055	6-18	2.5	1.8	15	±1.0	±10	30	SMA-Female
TFC29680056	18-40	2.5	1.8	16	±0.6	±6	30	2.92mm-Female

5、COAXIAL COUPLER

5.1 Coaxial Directional Couples

Part#	Frequency (GHz)	Coupling(dB)	Insertion Loss (dB)	VSWR	Directivity (dB)	Power Handling (W)	Interface
TFC29690002	0.4-6	20±1.5	0.8	1.5	12	50	SMA-Female
TFC29690003	1-4	40±1.5	0.4	1.3	15	30	SMA-Female
TFC29690004	0.4-6	30± 2.6	0.8	1.6	12	30	SMA-Female

Part#	Frequency (GHz)	Coupling(dB)	Insertion Loss (dB)	VSWR	Directivity (dB)	Power Handling (W)	Interface
TFC29690005	2-18	13±1.2	0.5	1.35	15	50	SMA-Female
TFC29690006	2-18	20±1.0	1.0	1.6	12	30	SMA-Female
TFC29690007	2-40	20±0.8	1.5	1.7	10	20	2.92mm-Female
TFC29690008	6-18	6±1.0	2.5	1.8	12	30	SMA-Female
TFC29690009	8-12	20d±1.0	1.5	1.7	12	30	N-Female
TFC29690010	8-12	20d±1.0	0.4	1.4	15	50	SMA-Female
TFC29690011	18-40	30±1.0	1.0	1.7	12	30	2.92mm-Female

5.2 Double Directional Couplers

Part#	Frequency (GHz)	Coupling(dB)	Insertion Loss(dB)	Directivity(dB)	VSWR(:1)	Power Handling (W)	Interface
TFC29690012	1-6	10±1.2	0.8	20	1.3	50	SMA-Female
TFC29690013	2-18	20±1.0	0.5	12	1.5	30	SMA-Female
TFC29690014	2-18	30±1.0	0.5	12	1.5	50	SMA-Female
TFC29690015	6-18	30±1.0	0.8	10	1.5	50	SMA-Female
TFC29690016	18-55	20±1.0	1.5	12	1.7	30	1.8mm-Female

5.3 Power Couplers

Part#	Frequency (GHz)	Coupling(dB)	Insertion Loss(dB)	VSWR (:1)	Directivity(dB)	Power Handling (W)	Interface
TFC29690018	6-18	40±2	0.7	1.4	10	250	N-K/SMA-K
TFC29690019	0.1-2	52±2	0.28	1.1	18	300	-
TFC29690020	6-18	40±2	0.7	1.4	10	250	N-K/SMA-K
TFC29690021	18-50	20±1.5	1.4	1.8	12	30	2.4mm-Female

6、COAXIAL HYBRIDS

6.1 90°dB hybrids

Part#	Degree (°)	Frequency (GHz)	Insertion Loss(dB)	VSWR	Isolation(dB)	Amplitude Balance (dB)	Phase Balance(°)	Power Handling (W)	Interface
TFC29740002	90	0.6-4	0.8	1.3	20	0.6	8	50	SMA-Female
TFC29740003	90	1-2	0.3	1.2	25	0.4	2	50	SMA-Female
TFC29740004	90	2-4	0.3	1.2	24	0.5	2	50	SMA-Female
TFC29740005	90	2-8	0.6	1.2	22	0.5	5	50	SMA-Female
TFC29740006	90	4-8	0.3	1.25	22	0.5	3	50	SMA-Female
TFC29740007	90	1-18	1.2	1.5	18	1.0	2	50	SMA-Female
TFC29740008	90	2-18	1.0	1.4	18	0.5	5	50	SMA-Female
TFC29740009	90	6-18	0.9	1.5	18	0.6	5	50	SMA-Female
TFC29740010	90	8-12	0.8	1.3	18	0.6	5	50	SMA-Female
TFC29740011	90	18-40	1.9	1.5	15	0.8	10	50	2.92mm-Female

6.2 180°dB Hybrids

Part#	Degree (°)	Frequency Range(GHz)	Insertion Loss(dB)	VSWR (:1)	Isolation (dB)	Amplitude Balance (dB)	Phase Balance (°)	Power Handling(W)	Interface
TFC29740012	180	1-2	0.4	1.25	23	0.5	10	50	SMA-Female
TFC29740013	180	2-4	0.4	1.35	20	0.5	9	30	SMA-Female
TFC29740014	180	2-18	2.5	1.5	18	1.0	11	50	SMA-Female
TFC29740015	180	8-12	1.2	1.4	18	0.6	10	50	SMA-Female
TFC29740016	180	18-40	3.0	1.6	15	1.5	12	50	2.92mm-Female

7、Coaxial Attenuator

7.1 Fixed Attenuators

Part#	Frequency Range (GHz)	Average Power (W)	Attenuation (dB)	VSWR(Max)	Interface
TFC29720002	DC-18	100	3,6,10,20,30,40,50	1.4	N
TFC29720004	DC-12.4	200	10,20,30,40,50	1.4	N
TFC29720005	DC-6	500	40,50	1.3	N
TFC29720006	DC-40	100	20,30,40	1.4	2.92mm
TFC29720007	DC-4	2	10,20,30,40,50	1.25	N
TFC29720008	DC-8	2	1-9,10,20,30,40,50	1.3	N
TFC29720003	DC-6	2	1-9,10,12,15,20,30,40	1.3	N
TFC29720009	DC-40	2	1-7,7-10,20,30,40	1.3	2.92mm
TFC29720010	DC-18	2	1-9,10,20,30,40,50	1.4	N
TFC29720011	DC-4	5	1-9,10,20,30,40	1.2	N
TFC29720012	DC-8	10	1-9,10,20,30,40	1.2	SMA
TFC29720013	DC-6	25	1-9,10,20,30,40,50	1.25	SMA
TFC29720014	DC-18	30	1,6,10,20,30,40	1.45	SMA
TFC29720015	DC-40	10	1-10,20,30	1.35	2.92mm

7.2 Voltage Controlled Attenuators

Part#	Frequency Range (GHz)	Insertion Loss (dB)	Attenuation Range (dB)	VSWR	DC Voltage(v)	Power (in)	Interface
TFC29720016	0.2-3	3.0	30	1.4	12	30	SMA-Female
TFC29720017	DC-18	3.0	35	2.0	5	23	SMA-Female
TFC29720018	2-18	1.4	50	1.5	10	37	SMA-Female
TFC29720019	60-90	5.0	36	2.0	-	15	SMA-Female

7.3 Digitally Controlled Attenuators (DCA)

Part#	Frequency (GHz)	Insertion Loss(dB)	Control Bit TTL	Attenuation Step(dB)	Total Attenuation (dB)	VSWR (:1)	Power (W)	Interface
TFC29720020	0.1-18	5.0	6	0.5	31.5	2.0	25	SMA-Female
TFC29720021	0.1-18	4.5	7	0.5	63	2.2	24	SMA-Female
TFC29720022	0.1-40	6.0	5	1.0	31	2.0	25	2.92mm-Female
TFC29720023	1-8	5.0	7	0.5	63	1.8	27	SMA-Female
TFC29720024	0.1-40	13	6	1.0	62	2.5	23	2.92mm-Female
TFC29720025	8-18	10	7	1.0	127	2.0	25	SMA-Female

8、COAXIAL LOAD

8.1 Coaxial Loads

Part#	Frequency (GHz)	VSWR (:1)	Power Handling(W)	Impedance(Oh)	Interface
TFC29780011	DC-8	1.25	2	50	N Male
TFC29780002	DC-18	1.3	1	50	SMA Male
TFC29780003	DC-18	1.15	1	50	SMA Male
TFC29780004	DC-27	1.15	1	50	3.5 Female
TFC29780005	DC-40	1.2	1	50	2.92mm-Male
TFC29780006	DC-18	1.15	2	50	SMA-Female
TFC29780007	DC-40	1.20	2	50	2.92mm-Male
TFC29780008	DC-50	1.3	2	50	2.4mm Male
TFC29780009	DC-67	1.4	2	50	1.85mm Male
TFC29780010	DC-18	1.45	100	50	N Female

9、COAXIAL FILTER

9.1 Low Pass Filters

Part#	Frequency Range(GHz)	Pass Band Ripple(dB)	Rejection(dB)	VSWR	Interface
TFC29820002	DC-1.8	1.8	>30dB@2200MHz	1.6	SMA-Female
TFC29820003	DC-1	0.6	>40dB@dc-2000-4000MHz	1.6	SMA-Female
TFC29820004	DC-1	1.0	>50dB@1.5-3.5GHz	1.8	SMA-Female
TFC29820005	DC-2	1.3	>40dB@2400-8000MHz	1.5	SMA-Female
TFC29820006	DC-2	1.0	>50dB@2.3-6GHz	1.6	SMA-Female
TFC29820007	DC-4.4	1.0	>50dB@5-11GHz	1.6	SMA-Female
TFC29820008	DC-4	1.2	>50dB@4.6-10GHz	1.6	SMA-Female
TFC29820009	DC-6	1.0	>50dB@6.5-13GHz	1.5	SMA-Female
TFC29820010	DC-8	1.0	>50dB@9.3-16GHz	1.6	SMA-Female
TFC29820011	DC-12（MHz）	0.4	>40dB@18-200MHz	1.5	SMA-Female
TFC29820012	DC-18	0.8	>50dB@20.7-23GHz	1.6	SMA-Female
TFC29820013	DC-18（MHz）	0.8	>35dB@30Mhz，>55dB@60 Mhz	1.5	SMA-Female
TFC29820014	DC-20（MHz）	0.8	>50dB@26.5MHz	1.5	SMA-Female
TFC29820016	DC-20（MHz）	0.8	>50dB@26.5MHz	1.5	SMA-Female
TFC29820017	DC-40（MHz）	1.0	>40dB@50MHz	1.5	SMA-Female
TFC29820018	DC-6	1.5	20@8.5GHz,40@10.3GHz	-	2.92mm
TFC29820019	DC-8	1.9	20@10.4GHz,40@12.6GHz	-	2.92mm
TFC29820020	DC-12	1.2	20@16.2GHz,40@19.4GHz	-	2.92mm
TFC29820021	DC-18	1.3	20@23.3GHz,40@27.4GHz	-	2.92mm
TFC29820022	DC-40	2.0	20@46.7GHz,25@48.5GHz	-	2.92mm

9.2 Band Pass Filters

Part#	Frequency Range(GHz)	Bandwidth (MHz)	Insertion Loss(dB)	Pass band Ripple(dB)	Rejection(dB)	Interface
TFC29820023	1-2	1	1.5	1.0	>15dB@dc-0.5GHz，3GHz	SMA-Female
TFC29820024	1-2	1	1.0	0.9	>50dB@dc-0.7GHz，2.3-4GHz	SMA-Female
TFC29820025	2-4	2	1.2	1.0	>42dB@dc-1.5GHz，4.5-7GHz	SMA-Female
TFC29820026	2-4	2	1.0	0.9	>15dB@dc-1GHz，5GHz	SMA-Female
TFC29820027	2-6	4	1.5	1.2	>50dB@dc-0.8GHz，7.2-10GHz	SMA-Female
TFC29820028	4-6	2	1.5	1.0	>50dB@dc-3.4GHz，>50dB@7-13GHz	SMA-Female
TFC29820029	4-8	4	1.0	0.9	>15dB@3GHz，9GHz	SMA-Female
TFC29820030	4-8	4	1.2	1.0	>50dB@DC-3.4GHz，9.2-15GHz	SMA-Female
TFC29820031	6-18	12	1.5	1.4	>50dB@DC-5GHz，21-25GHz	SMA-Female
TFC29820032	6-18	12	1.2	1.0	>50dB@DC-4.8GHz，21-24GHz	SMA-Female
TFC29820033	16.2-16.3	0.2	1.8	1.0	>50dB@FC±450MHz	SMA-Female
TFC29820034	18-26.5	8.5	1.8	1.6	>40dB@DC-168GHz，29GHz	SMA-Female
TFC29820035	17.75-18.25	0.5	1.5	1.2	>50dB@FC±1000MHz	SMA-Female
TFC29820036	19.9-20.1	0.1	2.0	1.6	>40dB@fo±800MHz	SMA-Female
TFC29820037	39-41	1	1.8	1.6	>40dB@fo±3GHz	2.92mm-Female
TFC29820038	1.275-1.725	0.45	3.0	2.8	>40dB@fc±300MHz	SMA-Female
TFC29820039	1.6-2	0.4	1.8	1.0	≥70dB@3.82GHz，≥50dB@5.43GHz	SMA-K
TFC29820040	3-5.1	2.1	1.5	1.0	≥50dB@7.2-10GHz	SMA-K
TFC29820041	2-6	4	1.5	1.2	>50dB@DC-1.6GHz，6.9-18GHz	SMA-Female
TFC29820042	6-18	12	2.5	2.2	>50dB@DC-6.4GHz，20.7-24GHz	SMA-Female
TFC29820043	1.3-2.3	1	2.0	1.1	32@1.1GHz&2.6GHz	2.92mm
TFC29820044	23.9-26.6	.2.7	3.8	1.4	40@21.5GHz&27.5GHz	2.92mm

Part#	Frequency Range(GHz)	Bandwidth (MHz)	Insertion Loss(dB)	Pass band Ripple(dB)	Rejection(dB)	Interface
TFC29820045	24.2-24.7	0.5	8.6	1.4	40@23.1GHz&25.4GHz	2.92mm
TFC29820046	27.85-30-15	2.3	4.8	1.4	40@25.6GHz&31.1GHz	2.92mm
TFC29820047	35.45-37.85	2.4	5.1	1.4	40@32.6GHz&38.8GHz	2.92mm

9.3 Band Reject Filters

Part#	Stop Band Frequency (MHz)	Stop Band Attenuation(dB)	Pass Band Insertion Loss(dB)	Pass Band Frequency (MHz)	Interface
TFC29820048	2400-2500	40	2.0	DC-2170MHz&3000MHz-12000MHz	SMA-Female
TFC29820049	4575-4625	40	3.0	DC-4500MHz&4700MHz-6000MHz	SMA-Female
TFC29820050	1220-1275	55	1.5	6-11.675GHz&13.275GHz-18GHz	SMA-Female
TFC29820051	805-850	50	3.0	DC-660MHz&880MHz-2000MHz	SMA-Female
TFC29820051	805-850	60	1.0	DC-740MHz，907MHz-2400MHz	SMA-Female
TFC29820052	880-915	50	3.0	DC-740MHz，970MHz-2700MHz	SMA-Female
TFC29820053	1850-1920	60	1.5	DC-1780MHz，1990MHz-4000MHz	N-Female
TFC29820054	2090-2170	45	3.0	DC-2070MHz&2190MHz-6000MHz	SMA-Female
TFC29820055	2570-2620	50	3.0	DC-2535MHz，2655MHz-6000MHz	SMA-Female
TFC29820056	4000-4200	50	3.0	DC-3900MHz，4300MHz-6500MHz	SMA-Female
TFC29820057	5150-5850	40	1.5	DC-4450MHz&6400MHz-11000MHz	SMA-Female

9.4 High Pass Filters

Part#	Frequency (GHz)	Insertion Loss(dB)	Pass Band Ripple(dB)	VSWR	Rejection	Interface
TFC29820058	1.5-12	1.5	1.2	1.8	>456dB@DC-700MHz	SMA-Female
TFC29820059	1-18	1.5	1.2	1.8	>45dB@dc-0.8Ghz	SMA-Female
TFC29820060	2-18	1.8	1.6	1.6	>40dB@DC-1.5GHz	SMA-Female
TFC29820061	2-18	1.5	1.3	1.8	>50dB@DC-1.5GHz	SMA-Female
TFC29820062	4-18	1.5	1.2	1.5	>40dB@DC-3GHz	SMA-Female
TFC29820063	8-40	1.5	1.2	2.3	>45dB@DC-6GHz	SMA-Female
TFC29820064	18-40	2.0	1.6	2.2	>40dB@DC-17GHz	2.92mm-Female
TFC29820065	0.6-5.6	1.8	1.6	1.7	>40dBc@DC-300MHz	SMA-Female
TFC29820066	2.5-20	2.0	-	-	20@1.61GHz，40@1.45GHz	2.92mm
TFC29820067	2-18	2.0	-	-	20@1.5GHz，40@1.37GHz	2.92mm
TFC29820068	18-40	1.7	-	-	20@14.5GHz，40@13.3GHz	2.92mm
TFC29820069	20-40	2.0	-	-	20@16GHz，40@14.3GHz	2.92mm

10、DC BLOCK/RF Bias Tee

10.1 DC Blocks

Part#	Frequency (GHz)	VSWR	Insertion Loss (dB)	Voltage（V)	Interface
TFC54510004	0.005-40	1.3	0.5	60	2.92mm-Female to Female
TFC54510005	0.01-12	1.3	0.7	50	SMA-Male to Female
TFC54510006	0.01-18	-	0.4	200	SMA
TFC54510007	0.005-67	1.3	0.7	60	1.85mm Male to Female
TFC54510008	0.005-67	1.3	0.7	60	1.85mm Male to Female

10.2 RF Bias Tees

Part#	Frequency (GHz)	Insertion Loss (dB)	Voltage（V)	Return Loss(dB)	RF Power(W)	Interface
TFC54510009	0.5-12	1.5	100	-12	10	SMA
TFC54510010	0.01-6	0.9	50	-	1	SMA
TFC54510011	0.016-43	3.0	50	-12	1	2.92mm-Female
TFC54510012	0.01-18	2.0	50	-15	1	SMA-Female

11、RF Detector

11.1 RF Detectors

Part#	Frequency (GHz)	Sensitivity (mV/uW)	Input Power(mW)	VSWR	Input Interface	DC Output Interface
TFC29840002	0.01-18	0.4	10	2	SMA-Female	SMA-Female
TFC29840004	0.01-40	0.35	100	2	2.92mm Male	SMA-Female
TFC29840003	0.01-40	0.5	100	2	2.4mm Male	SMA-Female
TFC29840006	0.01-40	0.35	20	2	2.92mm Male	SMA-Female
TFC29840005	0.01-43	0.6	16	2	2.92mm Male	SMA-Female
TFC29840007	0.01-67	0.6	10	-	1.85mm-Female	SMA-Female
TFC29840008	0.01-110	0.6	10	-	1.0mm-Female	SMA-Female
HG29840010	2-18	-	-	-	SSMA-K	SSMA-K
HG29840011	8-18	-	-	-	SMA-K	SMA-K
HG29840012	18-40	-	-	-	2.92-K	SMA-K

11.1 Continuous Detection Logarithmic Amplifiers

Part#	Frequency (GHz)	Tangent Sensitivity (dBm)	Dynamic Range (dB)	Interface
TFC29840009	0.1-20	-59	65	2.92mm

12、RF Equalizers/RF Limiters

12.1 RF Equalizers

Part#	Frequency (GHz)	Insertion Loss (dB)	Equalization Amount (dB)	I/O Interface
TFC29890002	0.01-40	10	-	2.92mm
TFC29890003	6-18	7	-	SMA
TFC29890004	DC-1	0.8	2	2.92mm
TFC29890005	DC-2	0.7	1.5	2.92mm
TFC29890006	DC-18	1.5	7.5	2.92mm

12.2 RF Limiters

Part#	Frequency (GHz)	Insertion Loss (dB)	Power Handling Capacity （W）	Limiting Level (dBm)	I/O Interface
TFC29810002	0.1-2	0.4	2	17	SMAFemale/SMMale
TFC29810003	2-18	2.8	2	15	SMA
TFC29810004	DC-8	0.8	20	15	SMAFemale/SMMale
TFC29810005	DC-18	0.6	20	16	SMA
TFC29810006	DC-40	1	2	29	SMAFemale/SMMale
HG29810007	1.01-1.11	0.6	2000	-	SMA-K
HG29810008	1.2-1.4	46	400	-	SMA-K
HG29810009	5.3-5.9	24-25	200	-	SMA-K
HG29810010	9.5-10.5	30	180	-	Ø0.5mm insulator
HG29810011	2.7-3.4	27.5	400	15	Ø0.5mm insulator

13、Integrated Microwave Modules

13.1 RF Up/Down Converters

Part#	RF Frequency(GHz)	IF Frequency(GHz)	Gain(dB)	I/O Interface
TFC29920011	14-14.5	0.95-1.45	60	N Female
TFC29920012	14-14.5	0.95-1.45	65	N Female
TFC29920013	27-32	0.95-1.95	55	2.92mm-Female /WR28
TFC29920014	13.75-15.25	0.95-2.45	55	WR28/N Female
TFC29920015	27-31.5	0.95-2.45	50	WR28/N Female
HG29920030	2-18	1.4-2.4	-	MHLRM2-A192-BT30-XX
HG29920031	2-18	1.3-2.3	30	SMP(M)-JHD
HG29920032	2-18	1.65-2.85	20	SMP(M)-J
HG29920033	0.8-18	1.8	38	SMP(M)-JHD
HG29920034	2-18	1.3-2.3	30	PX-21TXXXXXX
HG29920035	2-18	1.3-2.3	30	PX-21TXXXXXX

13.2 Tx/Rx Modules

Part#	RF Frequency(GHz)	LO Frequency(GHz)	IF Frequency(GHz)	Conversion Loss（dB）	Interface	Input Power (dBM)
TFC29920016	18-40	4.5-10	DC-18	9	2.4mm	0
TFC29920017	20-50	10-250	DC-5	-10	2.4mm	-6
TFC29920018	37-65	9.25-16.25	DC-20	-10	1.85mm	13
TFC29920020	40-60	10.15	DC-20	-10	WR19	0
TFC29920019	40-60	10-15	DC-20	-10	WR19	5
TFC29920021	40-60	40-60	DC-20	-10	WR19	0
TFC29920022	50-75	8.25-12.5	DC-10	9	WR15	0
TFC29920023	50-75	12.5-18.25	DC-20	-10	WR15	5

Part#	RF Frequency(GHz)	LO Frequency(GHz)	IF Frequency(GHz)	Conversion Loss（dB）	Interface	Input Power (dBM)
TFC29920024	60-90	10-15	DC-25	-10	WR12	5
TFC29920025	60-90	10-15	DC-30	10	WR15	5
TFC29920026	75-110	12.5-18.33	DC-20	-10	WR10	5
TFC29920027	75-110	9.37-13.75	DC-20	-12	WR10	6
TFC29920028	90-140	11.25-17.5	DC-20	-10	WR8	5
TFC29920029	110-170	9.16-14.17	DC-20	-10	WR8	5

14、Frequency Multipliers

14.1 Waveguide Frequency Multipliers

Part#	Output Frequency (GHz)	Output Power（dBm）	Input Power（dBm）	Frequency Multiplication Factor	Input Frequency (GHz)	Output Interface
TFC29830020	85-135	8	-	8	28.33-45	WR-10
TFC29830021	110-170	10	20	2	55-85	WR-06
TFC29830022	140-220	13	23	2	70-110	WR-05
TFC29830023	238-258	12	24	3	79.3-86	WR-3.4
TFC29830024	330-340	10	28	4	82.5-85	WR-2.8
TFC29830025	40-60	1	5	4	10-15	WR-19
TFC29830026	60-80	20	0	2	30-40	WR-12
TFC29830027	70-110	10	7	6	11.667-18.333	WR-10
TFC29830028	71-86	10	7	6	8.75-27.5	WR-10
TFC29830029	86-106	13	2	8	10.75-13.25	WR-10
TFC29830030	90-140	3	3	12	7.5-11.67	WR-08
TFC29830031	110-115	10	5	12	8.33-9.59	WR-08
TFC29830032	110-150	14	4	8	13.75-18.75	WR-06

14.2 Coaxial Frequency Multipliers

Part#	Output Frequency (GHz)	Output Power（dBm）	Input Power（dBm）	Frequency Multiplication Factor	Input Frequency (GHz)	Output Interface
TFC29830033	4-12	1	-	2	2-6	2.92mm Female
TFC29830034	4-15	2	-	2	2-7.5	2.92mm Female
TFC29830035	6-18	2	-	2	3-9	2.92mm Female
TFC29830036	10-30	-6	-	2	5-15	2.92mm Female
TFC29830037	12-24	2	-	2	6-12	2.92mm Female
TFC29830038	16-40	-6	-	2	8-20	2.92mm Female
TFC29830039	16-40	2	-	2	8-20	2.92mm Female
TFC29830040	1-7	15	-2	2	0.5-3.5	SMA-Female
TFC29830041	4-16	15	10	2	2-8	SMA-Female
TFC29830042	7-21	14	7	2	3.5-10.5	SMA-Female
TFC29830044	18-50	15	-6	2	9-25	2.4mm Female
TFC29830047	20-60	16	-2	2	10-26	1.85mm Female
TFC29830048	24-40	15	6	2	12-20	2.92mm Female
TFC29830049	32-50	0	0	4	8-12.5	2.4mm Female
TFC29830051	36-57	27	5	3	12.19	1.85mm Female
TFC29830043	18-40	15	5	4	4.5-10	SMA-Female
TFC29830045	18-67	15	0	4	4.5-16.75	1.85mm Female
TFC29830046	20-50	15	18	4	5-12.5	2.4mm Female
TFC29830050	40-70	17	5	4	10-17.5	1.85mm Female

15、Coaxial Mixers

15.1 Single-Sideband Mixers (SSB Mixers)

Part#	RF Frequency(GHz)	LO Frequency(GHz)	IF Frequency(GHz)	Image Rejection(dBc)	Interface
TFC29830052	4-8	4-8	0.1	25	SMA
TFC29830053	8-12.5	8-12.5	0.1	25	SMA
TFC29830054	12.5-20	12.5-20	0.1	25	SMA

15.2 Coaxial IQ Mixers

Part#	RF Frequency(GHz)	LO Frequency(GHz)	IF Frequency(GHz)	Image Rejection(dBc)	Interface
TFC29830055	0.4-0.8	0.4-0.8	DC-0.5	25	SMA-Female
TFC29830058	1-4	1-4	0.01-1	30	SMA-Female
TFC29830059	2-18	2-18	DC-3	30	SMA-Female
TFC29830056	4-8	4-8	DC-2	30	SMA-Female
TFC29830057	5-20	5-20	DC-6	35	SMA-Female
TFC29830060	6-26	6-26	DC-6	32	2.92mm Female
TFC29830061	10-40	10-40	DC-12	20	2.92mm Female
TFC29830062	18-65	18-65	DC-23	30	1.85mm Female

15.3 Coaxial Balanced Mixers

Part#	RF Frequency (GHz)	LO Frequency (GHz)	IF Frequency (GHz)	Conversion Loss(dB)	Interface
TFC29830063	0.01-50	0.01-50	DC-5	5	2.4mm Female
TFC29830064	0.01-67	0.01-67	0.01-1	7	1.85mm Female
TFC29830065	2-22	2-22	DC-3.5	10	SMA-Female

Part#	RF Frequency (GHz)	LO Frequency (GHz)	IF Frequency (GHz)	Conversion Loss(dB)	Interface
TFC29830066	6-26	6-26	DC-12	9	2.92mm Female
TFC29830067	10-44	10-44	DC-14	10	2.4mm Female
TFC29830068	5-30	5-30	2-20	12	2.92mm Female
TFC29830069	14-67	14-67	DC-21	9	1.85mm Female
TFC29830070	18-50	18-50	DC-20	11	Interface1:2.4mmFemale;Interface2:SMAFemale;Interface3:2.4mmFemale
TFC29830071	18-67	18-67	DC-21	9	1.85mm Female
TFC29830072	50-110	50-110	DC-40	-10	1.0mm Female

16、RF Antennas

Part#	service frequency （GHz）	VSWR	Gain（dBi）	Polarization method	Interface
TFC29400002	0.38-2	2.5	-11-6	RHCP	SMA-K
TFC29400003	1-18	2.5	6	VV/HH	SMA-50K
TFC29400004	2-18	2.5	0-6	RHCP	SMA-50K
TFC29400005	18-40	2.5	12-22	VV/HH	2.92-K(F)
TFC29400006	2-18	2.5	6.5-14	LP	SMA-50K
TFC29400007	2-18	2.5	6.5-14	LP	SMA-50K
TFC29400008	18-40	2.0	12	LP	2.92-K
TFC29400009	18-40	2.0	12	LP	K

17、Portable Signal Sources

17.1 Portable Signal Sources

Part#	Output Frequency (GHz)	Output Power （dBm）	Spurious Suppression (dBc)	Power Supply
TFC28270002	10-20	0-5	60	+6V/≤2A
TFC28270003	9kHz~50MHz/ 50MHz~22.6GHz	-5	65	+12V≤800mA
TFC28270004	9kHz～40	5	60	220V
TFC28270005	18	-5	65	VCC1：+5V/≤300mA; VCC2：+12V/≤20mA
TFC28270006	2.675	5	60	VCC1：+5V/≤300mA; VCC2：+5V/≤20mA
TFC28270007	10-12	8	45	VCC1：+5V/≤300mA; VCC2：+12V/≤20mA
TFC59480389	200MHz~20GHz 200MHz~40GHz	±0.5（0~ + 10dBm） /±2.0（-40~0dBm	65	-

17.2 Local Oscillators

Part#	Output Frequency (MHz)	Frequency Step (Hz)	Frequency Hopping Time (μs)	Output Power (dBm)	Spurious (dBc)	Harmonic (dBc)
TFC59480386	50 MHz – 22.6 GHz	0.1 Hz/0.1 mHz (Option 2)	400	4 ±5	70	-5
TFC59480387	5 ~ 10	0.1 / 0.1m	20	10	75	-
TFC59480388	1250MHz–10GHz / 2500MHz–20GHz	0.1	10	5	65	-5

18、Rubidium Atomic Clocks

Part#	Output frequency(GHz)	Output amplitude	Spurious(dBC)	Phase noise
TFC59480383	10MHz (Square Wave)	LVCOMS	80	150

19、PDRO

Part#	Frequency Range (GHz)	Output Power (dBm)	Spurious (dBc)	Harmonics (dBc)	Input Reference Frequency / Phase Noise
TFC59480384	1-52	10	70	20	100MHz/-170dBc/Hz@1KHz
TFC59480385	1-52	10	70	20	100MHz/-170dBc/Hz@1KHz

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