



LOW NOISE AMPLIFIERS

	Part Number	Freq. (GHz)	NF(dB)	Gain (dB)	Gain Flatness (dB)	VSWR	P1dB (dBm)	Bias Supply (V/mA)
<i>New</i>	QP114FH	DC~6	2.5	17	±1	1.5/1.5	17	5/50
	QP111FH	0.2~0.6	0.8	38	±0.2	1.5/1.5	17	5/75
	QP111FF	0.4~0.6	0.6	38	±0.2	1.2/1.5	18.5	5/80
	QP113FG	0.4~3.5	1.2	18	±1	1.5/1.5	18	5/45
<i>New</i>	QP112FG	0.8~2	0.6	28.5	±0.7	1.6/1.1	15	5/40
	QP113FD-1	0.8~4	1.5	38	±0.5	1.3/1.6	20	5/115
<i>New</i>	QP112F-1	0.9~1.5	0.5	32	±0.3	1.8/1.4	15	5/45
	QP112F	0.9~1.5	0.65	34.5	±0.2	1.5/1.3	19.5	5/90
	QP113FH	1~3	1.2	25	±0.5	1.5/1.3	14	5/55
	QP113FB-3	1.4~3	0.8	36	±0.5	1.5/1.2	18	5/100
<i>New</i>	QP113FC-2	2~4	0.5	29.5	±0.8	1.4/1.3	12.5	5/28
<i>New</i>	QP113FW	2~4	4	11	±0.1	1.1/1.2	14	5/30
<i>New</i>	QP113FW-1	2~5	2.8	14	±0.5	1.2/1.3	14	5/19
<i>New</i>	QP113FW-2	2~5	3.3	10	±0.5	1.2/1.3	10	5/19
	QP114FE	2~8	1.8	28.5	±1.3	1.5/1.5	16.5	5/85
	QP117FE	2~20	1.8	15	±0.25	1.2/1.4	9.5	5/48
	QP113FA-2	2.5~3.5	0.8	33	±0.4	1.4/1.5	8	5/28
	QP113FV	2.5~3.5	0.8	33	±0.2	1.2/1.5	12	5/30
<i>New</i>	QP113FV-1	2.7~3.5	0.6	27	±0.5	1.3/1.3	10.5	5/27
<i>New</i>	QP113FV-2	2.5~3.5	0.6	33	±0.5	1.5/1.2	9.5	5/29
<i>New</i>	QP114FI-3	4~7	2.5	12	±0.1	1.4/1.6	17.5	5/37
<i>New</i>	QP114FK	4~8	0.7	23	±0.5	1.4/1.3	11.5	5/27
<i>New</i>	QP114FI-1	5~6	2.8	20	±0.3	1.3/1.2	14	5/40
<i>New</i>	QP114FI-2	5~6	4.6	18.6	±0.1	1.4/1.4	14	5/40
<i>New</i>	QP114FJ	5~6	3	10.5	±0.01	1.2/1.5	12	5/20
	QP114F	5~6	5.2	7	±0.1	1.2/1.4	15	5/20
	QP114FD	5~6	4.2	19	±1	1.8/1.5	21	8/95



LOW NOISE AMPLIFIERS (CONTINUED)

	Part Number	Freq. (GHz)	NF(dB)	Gain (dB)	Gain Flatness (dB)	VSWR	P1dB (dBm)	Bias Supply (V/mA)
	QP114FA-3	5~6.5	0.8	25	±0.2	1.5/1.1	13	5/30
New	QP114FA-5	5~6	0.7	29.5	±0.1	1.3/1.1	11.5	5/28
New	QP114FA-6	5~6	0.7	26	±0.25	1.3/1.2	10	5/28
	QP116F-3	6~18	1.5	25	±1.2	1.9/1.5	17	5/76
	QP116F-4	6~18	2	19.5	±0.5	1.6/1.3	13	5/80
	QP116F-5	6~18	2	24	±1	1.5/1.5	9	5/62
New	QP116F-6	6~18	1.6	29	±1.4	1.4/1.4	12.5	5/52
	QP115FD-3	8~12	1.1	19.5	±0.8	2/1.6	8	5/47
New	QP115FD-5	8~12	0.9	22	±0.7	1.4/1.4	13.5	5/32
New	QP115FD-6	8~12	0.9	22.5	±0.4	1.4/1.3	7	5/43
New	QP115FD-7	8~12	2.5	19	±0.2	1.4/1.5	11	5/30
	QP115FN	8~12	1	28	±0.5	1.4/1.2	10	5/40
	QP115FN-1	8~12	1.1	26	±0.6	1.4/1.3	10	5/30
	QP115FK	8~12	1.3	19.5	±0.5	1.6/1.4	4	5/15
New	QP115FL-2	8~12	1.2	26	正斜率	1.2/1.2	10	4/60
New	QP115FP	8~12	3.5	13.5	±0.3	1.3/1.3	12	5/30
New	QP115FP-1	8~10.5	2.4	17	±0.25	1.4/1.6	15.5	5/60
New	QP117FG	12~20	1.1	29	±0.7	1.2/1.3	6.5	5/14
	QP117FF	18~22	1.8	24	正斜率	2.5/2.5	8	5/25
	QP117FB	18~24	1.6	20.5	±0.5	1.6/1.3	2.5	5/12
New	QP117FH-1	15~25	1.4	20	±0.4	1.6/1.4	4.5	5/13
New	QP117FH-2	18~25	1.7	24	±0.8	1.4/1.1	-1	5/7
New	QP117FI	19~23	2	23.5	±0.5	1.2/1.3	-3.5	5/7
	QP117FC	20~23	1.9	27.5	±0.5	1.5/1.6	7	5/25
	QP117FD	20~24	2.3	28	±1	1.5/1.5	1.2	5/8
New	QP118FC-1	29~31	/	26	±1	1.6/1.6	4	5/19
	QP118FB	30~38	2	25	±0.5	1.7/1.7	10	2.5/82
New	QP118FD	32~37	/	28	正斜率	2/1.5	9	5/20
	QP110F-1	50~75	3.5	18	±0.8	1.9/1.6	10	2/73
	QP110FA	75~90	4.5	18	±1	1.9/1.6	10	2/85



BI-DIRECTION AMPLIFIERS

Part Number	Freq. (GHz)	Gain (dB)	Gain Flatness (dB)	NF (dB)	VSWR	P1dB (dBm)	Bias Supply (V/mA)
QP114FC	0.7~5	21	±0.5	4.5	1.5/1.5	16	5/120
QP113FC-1	2~4	25.5	±0.5	2	1.5/1.5	16	5/80

POWER AMPLIFIERS

Part Number	Function	Freq. (GHz)	Gain (dB)	Gain Flatness (dB)	Return Loss(dB)	P1dB (dBm)	Psat (dBm)	Bias Supply (V/A)
QP122FA-1	0.9~1.3	20	±0.3	14/11	26	/	/	5/0.265
QP122FA-3	0.9~1.3	36	±0.5	14/20	25.5	/	/	8/0.162
QP126F-1	6~18	26.5	±0.5	12/10	21	/	/	5/0.11
<i>New</i> QP125F	8~12	8	±0.2	15/15	20	/	/	5/0.09
<i>New</i> QP126FA	10~15	19	±1	15/15	16.5	/	/	5/0.065
<i>New</i> QP128F	32~37	21	±0.5	10/15	9	/	/	5/0.028
QP136F-1	6~18	23	/	10/10	33	35	20%	8/1.15
QP136F-2	6~18	23	/	15/15	36.5	37.5	20%	8/2.3
QP135FA	8~11	24	/	9.5/9.5	/	42	36%	8/3.3
QP135F	8.5~10.5	25	/	9.5/9.5	/	40.5	30%	8/3
QP138F	27~30	22	/	10/15	31	32	35%	6/0.45
QP138F-1	27.5~30	19	±1	20/20	35	36	24%	6/1.8



SWITCHES

Part Number	Function	Freq. (GHz)	Insertion Loss (dB)	Isolation (dB)	VSWR	Supply Voltage (V)	Control Voltage (V)
QP115KA	SPST, Reflective	DC~12	1.5	60	1.5/1.5	-5	0/+5
QP117K	SPST, Reflective	DC~20	2.1	55	1.5/1.5	-5	0/+5
QP123KB	SPDT, Reflective	DC~4	0.5	30	1.1/1.1	/	0/+5 或 0/-5
New QP123KF-1	SPDT, Non-reflective	DC~6	1.4	45	1.4/1.6	+5	0/+5
QP125KA-1	SPDT, Reflective	DC~12	0.9	50	1.2/1.2	-5	0/+5
QP125KA-1(M)	SPDT, Reflective	DC~12	0.9	50	1.2/1.2	-5	0/+5
QP125KC	SPDT, Reflective	DC~12	1	55	1.2/1.2	/	0/-5
QP126KB	SPDT, Reflective	DC~18	1	40	1.2/1.2	-5	0/+5
QP126KC	SPDT, Reflective	DC~18	1	40	1.2/1.3	/	0/-5
QP127K	SPDT, Non-reflective	DC~20	1.5	50	1.4/1.4	/	0/-5
QP127KB	SPDT, Reflective	DC~20	1.2	50	1.2/1.2	-5	0/+5
QP128KA	SPDT, Reflective	DC~40	2	25	1.4/1.4	/	0/-3 或 0/-5
New QP123KA-3	SPDT, Non-reflective	0.5~5	0.8	70	1.4/1.2	+5	0/+5
New QP123K-2	SPDT, Reflective	1~7	0.9	40	1.3/1.4	+5	0/+5
QP129K	SPDT, Reflective	24~40	3	33	2/1.8	/	0/-5
QP134KA	SP3T, Non-reflective	DC~8	1.5	45	1.4/1.4	-5	0/+5
New QP133K-2	SP3T, Non-reflective	DC~4	0.8	40	1.2/1.1	+5	0/+5
QP135K-1	SP3T, Reflective	DC~12	1.2/1.7	45	1.3/1.3	/	0/-5
New QP145KC	SP4T, Non-reflective	DC~8	2.4	60	1.5/1.4	-5	0/+5
New QP145KC-1	SP4T, Non-reflective	DC~8	1.5	60	1.3/1.3	-5	0/+5
QP146K	SP4T, Reflective	DC~18	3.5	45	1.6/1.4	-5	0/-5

(NOTE: The chip which need to provide additional power, integrated driver internally)



ATTENUATORS - Digital

Part Number	Function	Freq. (GHz)	Att. Step (dB)	Att. Range (dB)	Att. Accuracy (dB)	Insertion Loss (dB)	VSWR	Supply Voltage (V)	Control Voltage (V)
QP136S	3	DC~18	5	5~35	1	2	1.4/1.3	/	0/-5
QP136S-1	3	8~12	5	5~35	0.5	2.4	1.2/1.3	/	0/-5
QP137S	3	DC~24	0.25	0.25~1.75	0.2	1	1.4/1.3	-5	0/+5
New QP146SA	4	5~15	2	2~32	1	2.5	1.1/1.1	-5	0/+5
QP153S	5	0.5~4	0.5	0.5~15.5	0.5	2	1.3/1.3	+5	0/+5
New QP165S-5	6	DC~20	0.5	0.5~31.5	0.2	4.5	1.4/1.4	-5	0/+5
New QP166SE	6	DC~18	0.25	0.25~15.75	0.3	3	1.3/1.3	-5	0/+5
New QP166SB-1	6	DC~6	0.5	0.5~31.5	0.25	1.5	1.2/1.2	-5	0/+5
New QP166SB-2	6	DC~18	0.5	0.5~31.5	1	2.5	1.4/1.4	-5	0/+5
New QP165SC-1	6	DC~12	0.5	0.5~31.5	1	2.5	1.2/1.2	/	0/-5
QP165SC	6	8~12	0.5	0.5~31.5	0.5	2.8	1.4/1.3	/	0/-5
QP166SD	6	12~18	0.5	0.5~31.5	1	3.5	1.3/1.5	-5	0/+5
New QP136SA	Fixed	DC~20	0.5	0/0.5/1/1.5/2/ 2.5/3/3.5	0.1	0.25	1.2/1.2	/	/
New QP140S	Fixed	DC~20	1	0/1/2/3	/	0.5	1.1/1.1	/	/

(NOTE: The chip which need to provide additional power, integrated driver internally)



PHASE SHIFTERS - Digital

Part Number	Function	Freq. (GHz)	Phase Error (°)	Insertion Loss (dB)	VSWR	Supply Voltage (V)	Control Voltage (V)
QP154Y	5	5~6	1	5	1.3/1.2	-5	0/+5
QP155Y	5	7.7~8.5	1.5	6	1.2/1.4	-5	0/+5
QP161Y	6	0.5~0.6	1	7	1.3/1.3	-5	0/+5
New QP162Y-1	6	0.9~1.3	1	6	1.5/1.5	-5	0/+5
QP162YA	6	1.2~1.6	1	5	1.2/1.4	-5	0/+5
QP163YB	6	1.6~3.2	3	8	1.4/1.4	-5	0/+5
QP163YB-1	6	2~3.2	2	8	1.2/1.2	-5	0/+5
QP163Y	6	2.2~2.6	0.5	4.5	1.3/1.3	-5	0/+5
New QP163YA-3	6	2.6~3.6	1	4.5	1.4/1.4	-5	0/+5
QP164YA	6	3.4~4.2	1	5.5	1.4/1.4	-5	0/+5
QP164Y	6	5~6	1	5.5	1.3/1.3	-5	0/+5
QP165Y	6	8~12	1.5	8	1.4/1.4	-5	0/+5
QP166Y	6	14~18	1	11	1.5/1.5	-5	0/+5

(NOTE: The chip which need to provide additional power, integrated driver internally)



MIXERS

	Part Number	RF Freq. (GHz)	LO Freq. (GHz)	IF Freq. (GHz)	LO Input Power (dBm)	Conversion Loss (dB)	LO-RF Isolation (dB)
New	QP121H-1	0.6~1.4	0.6~1.4	DC-0.8	13	10	35
	QP122H	0.7~2	0.7~2	DC-1	13	8	36
	QP123H	1~3.5	1~3.5	DC-1.5	13	9.5	40
	QP122HA	1.2~2.6	1.2~2.6	DC-1.3	0	8	35
	QP123HA	1.5~4.5	1.5~4.5	DC-1.8	13	8	45
	QP123HB	2~4	2~4	DC~2	13	8	34
New	QP124H-1	4~8	4~8	DC-4	13	7	40
New	QP125H-1	8~12	8~12	DC-4	13	6.5	35
	QP125HA	8~15	8~15	DC-7	13	11	40
	QP126H	11~20	11~20	DC-9	13	8.5	30
	QP129H	38~54	38~54	DC~15	12	8	25
	QP120HA	78~95	26~30	DC~10	16	10	30

FREQUENCY MULTIPLIERS

Part Number	Function	Input Freq. (GHz)	Output Freq. (GHz)	Input Power (dBm)	Output Power (dBm)	1st_rejection (dBc)	3st_rejection (dBc)
QP128B	×2 Active	12~20	24~40	0	18	40	30
QP129BA	×2 Active	15~21	30~42	0	18	80	60
QP130B	×3 Active	29~32	87~97	16	14	50	/

UPCONVERTERS/DOWNCONVERTERS

	Part Number	Function	RF Freq. (GHz)	LO Freq. (GHz)	IF Freq. (GHz)	Conversion Gain (dB)	LO-RF Isolation (dB)	Bias Supply (V/mA)
	QP133U	Upconverter	2~3.5	2~3.5	DC~0.6	8.5	20	+5/100
	QP118U	Upconverter	28~30	27~31	DC~3	-10	/	+5/46
New	QP133V-1	Downconverter	2.5~4	2.5~4	DC~0.6	12.5	60	+5/85
	QP116V	Downconverter	8~12	10.8~14.8	2.8	-8.5	17	+5/70
	QP116V-1	Downconverter	8~12	10.8~14.8	2.8	-5	14	+5/110
	QP110V	Downconverter	90~97	30~32.3	DC~5	7	50	3.3/120&2/80
	QP132N	Up/Down converter	0.7~2	0.7~2	DC~1	6/5.5	60	+5/80
	QP154N	Up/Down converter	2.5~5	2.5~5	0.65~1.5	16/16	48	+5



MULTI-FUNCTION CHIPS

Part Number	Freq. (GHz)	Phase Shift bits	Att. Bits	Gain (dB)	Phase Error (°)	Att. Accuracy (dB)	VSWR	P1dB (dBm)
QP151N	0.4~0.5	6	6	23/11	2.5	0.8	1.6/1.6	21/2
QP133NA	2~2.4	6	6	16.5	1.2	0.4	1.5/1.4	19
QP133N	2.7~3.1	2	4	-3.1	0.6	0.05	1.1/1.1	/
QP143NA	2.7~3.5	6	6	2.5/-8.7	1.5	1	1.5/1.5	18/25
QP144NC	4.5~6.5	6	6	10.5	2.5	0.5	1.6/1.3	14
QP134N	5.3~5.9	5	-	13/13	1.5	/	1.7/1.7	17/16
QP135N	8~10	5	-	8/9	3	/	1.5/1.5	20/9
QP155N	8~12	6	6	3.5/2	2	0.5	1.7/1.7	13/12
QP155N-1	8~12	6	6	3.5/1.5	2.5	0.5	1.6/1.7	13/12
QP155N-2	8~12	6	6	4/2.5	2	0.5	1.7/1.6	13/12
QP155ND	8~12	6	6	7/5	2.5	0.8	1.6/1.5	15/9
QP125NB	8.7~10	5	-	-7	1.5	/	1.2/1.3	/
QP125NB(M)	8.7~10	5	-	-7	1.5	/	1.2/1.3	/

POWER DIVIDERS

Part Number	Function	Freq. (GHz)	Insertion Loss (dB)	Isolation (dB)	Input VSWR	Output VSWR
QP125GA	2	2~8	1	16	1.4	1.4
QP126G	2	2~18	0.8	14	1.4	1.4
QP125GB-1	2	6~14	0.7	20	1.4	1.4
QP126GA	2	6~18	0.8	20	1.3	1.3
QP126GB	2	6~18	0.8	20	1.6	1.4
QP126GC	2	12~18	0.5	24	1.3	1.2
QP127G	2	15.5~26.5	0.6	25	1.3	1.2
QP127GA	2	21~25	0.4	25	1.3	1.2
QP128GA	2	20~36	0.4	25	1.1	1.1
New QP128GB	2	30~40	0.4	25	1.1	1.1
QP146G	4	6~18	4	15	1.4	1.4



FILTERS

Part Number	Function	Freq. Range (GHz)	Pass Band Insertion Loss(dB)	Return Loss(dB)	Stop Band Rejection(dB)
QP123LA	Low Pass	DC~3	2.1	20/20	15.5@4.5GHz,52@7GHz
QP124LA	Low Pass	DC~4	1.7	25/25	24.6@5.7GHz,53.5@7.1GHz
<i>New</i> QP124L	Low Pass	DC~4.5	1.6	25/25	32@6.5GHz,71@8.1GHz
QP118L	Band Pass	30.5~32.5	1.7	15/15	30@22.6GHz,30.7@36GHz

EQUALIZERS

Part Number	Freq. (GHz)	Insertion Loss (dB)	Slope(dB)	Input VSWR	Output VSWR
<i>New</i> QP115JG-1	DC~12	0.7@12GHz	9	1.4	1.4
QP114J	1~5	0.6@5GHz	2	1.2	1.2
QP115J	2~8	0.5@8GHz	2	1.1	1.1
QP115JB	2~12	0.8@12GHz	3	1.1	1.1
QP116JC	2~18	0.8@18GHz	2.7	1.3	1.3
QP115JH-1	4~12	0.4@12GHz	3.5	1.4	1.4
QP114JA	5.3~5.9	0.2@5.9GHz	0.3	1.3	1.3
QP115JI	8~12	0.6@12GHz	2	1.3	1.3

PHASE MODULATION CHIPS

Part Number	Function	Freq.(GHz)	Insertion Loss (dB)	VSWR
QP125Y	2-Bit , Fixed	4~12	0.2	1.2/1.2
<i>New</i> QP126Y	2-Bit , Fixed	6~14	0.25	1.2/1.1
<i>New</i> QP126YA	2-Bit , Fixed	4~14	0.3	1.2/1.2
QP127Y	2-Bit , Fixed	8~19	0.3	1.3/1.3
QP146Y-1	4-Bit , Fixed	4~14	0.5	1.4/1.4



SPIRAL INDUCTORS

Part Number	Inductance (nH)(typ.)	Rs@DC (Ohm)	Rs@GHz (Ohm)	Q Value	Resonant Freq. (GHz)	Chip Size (mm*mm)
QP05L	5	1	3.7@4 GHz	26.5@4 GHz	16.5	0.75x0.75
QP07L	7.5	1.3	6@4 GHz	27@4 GHz	12.8	0.8x0.8
QP10L	10	1.6	8@4 GHz	26@4 GHz	11.3	0.8x0.8
QP15L	15	2.1	5.6@4 GHz	26.5@4 GHz	8.5	0.8x0.8
QP20L	20	2.6	7.5@2 GHz	28.5@2 GHz	7	0.8x0.8
QP50L	50	5.1	10.6@1 GHz	28.5@1.5 GHz	2.8	0.95x0.95
QP90L	90	8	26.3@1 GHz	26.5@1 GHz	1.8	1.1x1.1
QP200L	200	14	30@1 GHz	23@1 GHz	1	1.37x1.37