



RF power product selection guide

LDMOS & GaN-SiC transistors and ICs



RF power product selection guide

New products

PTVA082407NF

- > 746–821 MHz
- > Typical CW performance @ 755 MHz
 - $P_{1dB} = 225\text{ W}$
 - Gain = 20.5 dB
 - Efficiency = 43%



HBSOF-4-1

PTVA092407NF

- > 869–960 MHz
- > Typical CW performance @ 925 MHz
 - $P_{1dB} = 223\text{ W}$
 - Gain = 20.7 dB
 - Efficiency = 52%



HBSOF-4-1

PTRA082808NF

- > 790–820 MHz
- > Typical pulsed CW performance, 820 MHz
 - $P_{3dB} = 250\text{ W avg}$
 - Gain = 16.2 dB
 - Efficiency = 55.6 %



HBSOF-6-2

PTRA093818NF

- > 925–960 MHz
- > Typical pulsed CW performance, 960 MHz
 - $P_{3dB} = 375\text{ W}$
 - Gain = 18 dB
 - Efficiency = 55%



HBSOF-6-2

For additional information contact us at highpowerRF@infineon.com, and on the web at www.infineon.com/rfpower.

Cellular infrastructure RF power transistors [400 MHz to 2700 MHz]

Product	Operating frequency [MHz]	Matching	P_{1dB} typ [W]	Gain typ [dB]	Eff typ [%]	$P_{OUT avg}$ [W]	Test signal	Supply voltage typ [V]	Technology	Package type
420 MHz to 960 MHz										
PTFB072707FH	728–768	I/O	270	18.5	39.0	60	WCDMA	28	LDMOS	H-34288-4/2
PTFB090901EA	920–960	I/O	90	19.5	40.0	25	WCDMA	28	LDMOS	H-36265-2
PTFB090901FA	920–960	I/O	90	19.5	40.0	25	WCDMA	28	LDMOS	H-37265-2
PTFB091507FH	920–960	I/O	150	20.0	38.0	50	WCDMA	28	LDMOS	H-34288-4/2
PTFB091802FC	920–960	I/O	180	19.5	34.0	55	WCDMA	28	LDMOS	H-37248-4
PTRA094252FC	746–960	I	208	18.5	48.0	89	WCDMA	48	LDMOS	H-37248-4
PTVA082407NF	746–821	I	240	22.5	35.5	80	WCDMA	48	LDMOS	HBSOF-4-1
PTVA092407NF	869–960	I	240	22.0	39.0	80	WCDMA	48	LDMOS	HBSOF-4-1
PTFB092707FH	925–960	I/O	270	19.5	33.0	63	WCDMA	28	LDMOS	H-37288L-4/2
PTRA083818NF	733–805	I	275	18.0	56.0	81.3	WCDMA	48	LDMOS	HBSOF-6-2
PTRA082808NF	790–820	I/O	280	15.9	44.9	56.2	WCDMA	48	LDMOS	HBSOF-6-2
PTVA093002ND	703–960	I	300	18.0	52.0	56.2	WCDMA	50	LDMOS	HB1SOF-4
PTRA093302FC	746–768	I	330	17.3	51.6	79	WCDMA	50	LDMOS	H-37248-4
PTFB093608FV	920–960	I/O	2X180	20.0	34.0	112	WCDMA	28	LDMOS	H-34275G-6/2
PTRA093818NF	925–960	I/O	415	17.0	52.0	81.3	WCDMA	48	LDMOS	HBSOF-6-2
PTRA094808NF	859–960	I/O	480	17.5	52.5	87	WCDMA	48	LDMOS	HBSOF-6-2

NEW

1800 MHz to 2000 MHz										
PXAC180602MD	1805–1880	I/O	60	17.7	54.5	8.9	WCDMA	28	LDMOS	HB1DSO-4
PXFC191507FC	1805–1990	I/O	150	20.5	31.0	32	WCDMA	28	LDMOS	H-37248G-4/2
PTFB181702FC	1805–1880	I/O	180	19.0	26.0	30	WCDMA	28	LDMOS	H-37248-4
PXAC182002FC	1805–1880	I/O	70+115	16.7	51.5	28.2	WCDMA	28	LDMOS	H-37248-4
PXFC192207FH	1805–1990	I/O	220	20.0	29.0	50	WCDMA	28	LDMOS	H-37288G-4/2
PXFC192207NF	1805–1990	I/O	220	18.7	30.3	50	WCDMA	28	LDMOS	HBSOF-4
PTFB182503EL	1805–1880	I/O	240	19.0	28.0	50	WCDMA	30	LDMOS	H-33288-6
PTFB182503FL	1805–1880	I/O	240	19.0	28.0	50	WCDMA	30	LDMOS	H-34288-4/2
PTFB192503EL	1930–1990	I/O	240	19.0	28.0	50	WCDMA	30	LDMOS	H-33288-6
PTFB192503FL	1930–1990	I/O	240	19.0	28.0	50	WCDMA	30	LDMOS	H-34288-4/2
PXAC182908FV	1805–1880	I/O	240	15.0	51.0	70	WCDMA	28	LDMOS	H-37275G-6/2
PXAC192908FV	1930–1995	I/O	240	14.0	49.0	70	WCDMA	28	LDMOS	H-37275G-6/2
PTFB183404E	1805–1880	I/O	340	17.0	25.5	80	WCDMA	30	LDMOS	H-36275-8
PXAD184218FV	1805–1880	I/O	420 @ P_{3dB}	16.0	51.5	60	WCDMA	28	LDMOS	H-37275G-6/2

Cellular infrastructure RF power transistors [400 MHz to 2700 MHz] (continued)

Product	Operating frequency [MHz]	Match-ing	P _{1dB} typ [W]	Gain typ [dB]	Eff typ [%]	P _{OUT} avg [W]	Test signal	Supply voltage typ [V]	Technol-ogy	Package type
2000 MHz to 2200 MHz										
PTFC210202FC	2110–2170	I/O	2x12	21.0	29.0	5	WCDMA	28	LDMOS	H-37248-4
PXAC210552FC	1805–2170	I/O	55	17.2	49.0	8	WCDMA	28	LDMOS	H-37248-4
PXAC210552MD	1800–2200	I/O	55	17.1	47.3	8.5	WCDMA	27	LDMOS	HB1DSO-4
PXAC210552ND	1805–2170	I/O	55	14.8	50.5	8.5	WCDMA	28	LDMOS	HB1SOF-4
GTVA220701FA	1805–2170	I	70 @P _{3dB}	22.0	27.0	6.3	LTE	50	GaN-SiC	H-37265J-2
PTAC210802FC	2110–2170	I/O	19+60	17.0	43.0	5	WCDMA	28	LDMOS	H-37248-4
PTFB210801FA	2110–2170	I/O	80	18.5	31.0	20	WCDMA	28	LDMOS	H-37265-2
PXAC200902FC	1805–2170	I/O	90	17.2	50.3	15	WCDMA	28	LDMOS	H-37248-4
PXAC201202FC	1800–2200	I/O	35+80	16.7	46.0	16	WCDMA	28	LDMOS	H-37248-4
PXAC201602FC	1880–2025	I/O	55+85	17.7	44.0	22	WCDMA	28	LDMOS	H-37248-4
PTFB201402FC	2010–2025	I/O	2x70	17.0	36.0	20	WCDMA	28	LDMOS	H-37248-4
PTFB211503FL	2110–2170	I/O	150	18.0	29.0	32	WCDMA	30	LDMOS	H-34288-4/2
PTFB212503FL	2110–2170	I/O	240	18.0	31.0	55	WCDMA	30	LDMOS	H-34288-4/2
PTFB213004F	2110–2170	I/O	300	18.0	26.5	60	WCDMA	30	LDMOS	H-37275-6/2
PTFB213208FV	2110–2170	I/O	2x160	17.0	33.0	50	WCDMA	28	LDMOS	H-37275-6/2
PXAC213308FV	2110–2200	I/O	320	16.5	43.5	55	WCDMA	28	LDMOS	H-37275G-6/2
PXAC203302FV	1880–2025	I/O	330	16.5	49.0	56	WCDMA	28	LDMOS	H-37275-4
PXAD214218FV	2110–2170	I/O	430	16.0	49.0	56	WCDMA	28	LDMOS	H-37275G-6/2

2300 MHz to 2400 MHz										
PTAC240502FC	2300–2400	I	17+33	14.3	44.0	10	WCDMA	28	LDMOS	H-37248-4
PXAC241702FC	2300–2400	I/O	60+90	16.5	52.0	28	WCDMA	28	LDMOS	H-37248-4
PXAC243502FV	2300–2400	I/O	150+200	15.5	44.0	68	WCDMA	28	LDMOS	H-37275-4

2500 MHz to 2700 MHz										
PTFC260202FC	2495–2690	I/O	2x12	20.0	30.0	5	WCDMA	28	LDMOS	H-37248-4
PTAC260302FC	2620–2690	I/O	12+17	15.5	45.0	5.5	WCDMA	28	LDMOS	H-37248H-4
PXAC260602FC	2620–2690	I/O	15+50	15.7	39.0	5	WCDMA	28	LDMOS	H-37248-4
PXAC261002FC	2496–2690	I/O	40+70	15.6	46.0	18	WCDMA	28	LDMOS	H-37248-4
PXAC261212FC	2496–2690	I/O	50+75	15.0	48.0	28	WCDMA	28	LDMOS	H-37248-4
PTFC261402FC	2620–2690	I/O	140	18.0	25.0	5	WCDMA	28	LDMOS	H-37248-4
GTVA261701FA	2620–2690	I	170 @P _{3dB}	17.0	43.0	40	WCDMA	50	GaN-SiC	H-37265J-2
PTFC262157FH	2620–2690	I/O	200	19.5	29.0	50	WCDMA	28	LDMOS	H-34288G-4/2
PTFC262802FV	2620–2690	I/O	280	18.0	24.0	56	WCDMA	28	LDMOS	H-37275G-6/2

General purpose RF transistors [700 MHz to 2200 MHz]

PTFA220041M	700–2200	No	5	19.0	37.5	4 (PEP)	Two-tone	28	LDMOS	SON-10
PTFA220121M	700–2200	No	15	16.0	37.0	9 (PEP)	Two-tone	28	LDMOS	SON-10
PTFC270051M	900–2700	No	7.3	20.0	60.0	–	CW @ 2170	28	LDMOS	SON-10
PTFC270101M	900–2700	No	12	20.0	60.0	–	CW @ 2170	28	LDMOS	SON-10
PTVA120121M	500–1400	No	12	21.0	65.0	15	CW	50	LDMOS	SON-10
PTVA120252MT	500–1400	No	25	19.8	64.0	–	CW	50	LDMOS	SON-16

Integrated RF power amplifiers [700 MHz to 2200 MHz]

PTMA080152M	700–1000	I	20	30.0	34.0	8	GSM/EDGE	28	LDMOS	DSO-20-63
PTMA180402M	1800–2200	I	40	30.0	16.0	5	CDMA	28	LDMOS	DSO-20-63
PTMA210152M	1800–2200	I	20	28.5	33.0	7	WCDMA	28	LDMOS	DSO-20-63
PTMC210204MD	1805–2200	I/O	10+10	30.5	19.0	2.5	WCDMA	28	LDMOS	HB1DSO-14
PTMC210404MD	1805–2200	I/O	37	31.5	19.3	5	WCDMA	28	LDMOS	HB1DSO-14

NEW

New products

GTVA104001FA

➤ 960–1215 MHz

➤ Typical pulsed CW performance

- P_{3dB} = 410 W
- Gain = 18.5 dB
- Efficiency = 70%



H-37265J-2

GTVA123501FA

➤ 1200–1400 MHz

➤ Typical pulsed CW performance

- P_{3dB} = 370 W avg
- Gain = 18 dB
- Efficiency = 72%



H-37265J-2

GTVA107001FC

➤ 960–1215 MHz

➤ Typical pulsed CW performance

- P_{3dB} = 750 W
- Gain = 17 dB
- Efficiency = 70%



H-37248-2

GTVA126001FC

➤ 1200–1400 MHz

➤ Typical pulsed CW performance

- P_{3dB} = 610 W
- Gain = 16 dB
- Efficiency = 70%



H-37248-2

UHF, L-Band & Broadcast RF power transistors [400 MHz to 1400 MHz]

Product	Operating frequency [MHz]	Match-ing	P_{1dB} typ [W]	Gain typ [dB]	Eff typ [%]	P_{OUT} avg [W]	Test signal	Supply voltage typ [V]	Technol-ogy	Package type
PTVA030121EA	390–450	No	12	25.0	69.0	–	Pulsed	50	LDMOS	H-36265-2
PTVA035002EV	390–450	No	400	19.5	65.0	–	Pulsed	50	LDMOS	H-36275-4
PTVA042502EC	470–806	I	250	19.0	25.5	55	DVB-T	50	LDMOS	H-36248-4
PTVA042502FC	470–806	I	250	19.0	25.5	55	DVB-T	50	LDMOS	H-37248-4
PTVA043502EC	470–860	I/O	350	18.0	29.5	70	DVB-T	50	LDMOS	H-36248-4
PTVA043502FC	470–860	I/O	350	18.0	29.5	70	DVB-T	50	LDMOS	H-37248-4
PTVA047002EV	470–806	I	700	17.5	29.0	130	DVB-T	50	LDMOS	H-36275-4
PTVA102001EA	1030/1090	I/O	200	18.0	57.0	–	Pulsed	50	LDMOS	H-36265-2
GTVA104001FA	960–1215	I	410 @ P_{3dB}	18.5	70.0	–	Pulsed	50	GaN-SiC	H-37265J-2
PTVA104501EH	960–1215	I/O	450	17.0	57.0	–	Pulsed	50	LDMOS	H-36288-2
GTVA107001FC	960–1215	I	750 @ P_{3dB}	17.0	70.0	–	Pulsed	50	GaN-SiC	H-37248-2
PTVA101K02EV	1030/1090	I	920	18.0	56.0	–	Pulsed	50	LDMOS	H-36275-4
PTVA120251EA	500–1400	No	30	16.0	56.0	–	Pulsed	50	LDMOS	H-36265-2
PTVA120501EA	1200–1400	I	54	16.5	55.0	–	Pulsed	50	LDMOS	H-36265-2
PTVA123501EC	1200–1400	I/O	375	17.0	55.0	–	Pulsed	50	LDMOS	H-36248-2
PTVA123501FC	1200–1400	I/O	375	17.0	55.0	–	Pulsed	50	LDMOS	H-37248-2
GTVA123501FA	1200–1400	I	370 @ P_{3dB}	18.0	72.0	–	Pulsed	50	GaN-SiC	H-37265J-2
GTVA126001FC	1200–1400	I	610 @ P_{3dB}	18.0	70.0	–	Pulsed	50	GaN-SiC	H-37248-2
PTVA127002EV	1200–1400	I/O	700	16.0	56.0	–	Pulsed	50	LDMOS	H-36275-4

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