

RF Power Transistors for Portable Equipment

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TYPE NUMBER	FREQUENCY (MHZ)	SUPPLY VOLTAGE (V)	LOAD POWER (W)	POWER GAIN (DB) MIN.	EFFICIENCY (%)		RESISTANCE ₃ (K/W)	THERMAL PACKAGE
					MIN.	TYP.		
ANALOG CELLULAR								
BLT80	900	7.5	0.8	6	60	67	22 ⁴	SOT223
BLT81	900	7.5	1.2	6	60	70	32 ⁵	SOT223
BLT80	900	6.0	0.8	6		70	22 ⁴	SOT223
BLT81	900	6.0	1.2	6		70	32 ⁵	SOT223
BLT70	900	4.8	0.6	6	60		38 ⁶	SOT223
BLT71	900	4.8	1.2	6	60		24 ⁷	SOT223
BLT71/81	900	4.8	1.2	10	55	63	50 ¹¹	SOT86 (SO8pl)
BLT61	900	3.8	1.2	6	50	60	30 ⁸	SOT86 (SO8pl)
DIGITAL CELLULAR								
BFG540W	900	8.0	18 dBm	6	60	67	22 ⁴	SOT433
BFG540W	1900	3.6	14 dBm	6	60	67	22 ⁴	SOT433
BFG10W/x	900	6.0	28 dBm	6	60	67	22 ⁴	SOT433
BFG10W/x	1900	3.6	20 dBm	6	60	67	22 ⁴	SOT433
BFG11W/x	1900	3.6	26 dBm	6	60	67	22 ⁴	SOT433
BLT82	900	6.0	3.5	6	50	65	32 ¹⁷	SOT96 (SO8pl)

APPLICATION	SUPPLY VOLTAGE	LOAD POWER	1ST STAGE	2ND STAGE	3RD STAGE
ANALOG	6.0	1.2	BFG540W/x	BLT80	BLT81*
	4.8	1.2	BFG540W/x	BLT70	BLT71
	4.8	1.2	BFG510W/x	BLT7118	–
	3.8	1.2	BFG540W/x	BFG10W/x	BLT61
GSM	6.0	3.5	BFG540W/x	BFG10W/x	BLT82
	4.8	3.0	BFG540W/x	BFG10W/x	
	3.6	3.0	BFG540W/x	BFG10W/x	
PCN/DCS1800	6.0	2.0	BFG540W/x	BFG10W/x	
	4.8	1.6	BFG540W/x	BFG10W/x	
DECT	3.6	0.4	BFG540/x	BFG10x	BFG11/x
			BFG540W/x	BFG10W/x	BFG11W/x

NOTES:

T_0 is the temperature at the soldering point of the collector tab

1. Preliminary specification
2. Objective specification
3. Junction to soldering point
4. $P_{tot} = 2W, T_G = 131^\circ C$
5. $P_{tot} = 2W, T_G = 110^\circ C$
6. $P_{tot} = 2W, T_G = 95^\circ C$
7. $P_{tot} = 3.5W, T_G = 90^\circ C$
8. $P_{tot} = 2W, T_G = 115^\circ C$
9. $P_{tot} = 2W, T_G = 115^\circ C$
10. $P_{tot} = 1W, T_G = 130^\circ C$
11. $P_{tot} = 1.7W, T_G = 90^\circ C$
12. $P_{tot} = 1.9W, T_G = 115^\circ C$