

# DATA SHEET

## **Selection guide** Wideband Hybrid Amplifier Modules

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# Wideband Hybrid Amplifier Modules

# Selection guide

TYPE NUMBER	POWER GAIN (dB)	SLOPE CABLE EQUIVALENT (SL) (dB)	FLATNESS (dB) MAX.	RETURN LOSS (INPUT/OUTPUT) (dB) MIN. notes: table 2	COMPOSITE TRIPLE BEAT (dB) MAX. notes: table 3
<b>Reverse Amplifier: 5 to 75 MHz Range</b>					
	<b>@ 10 MHz</b>				<b>4 chs</b>
BGY68	30 ± 0.8	-0.2 to +0.5	±0.2	20	-68 <sup>(3.1)</sup>
<b>Reverse Amplifier: 5 to 120 MHz Range</b>					
	<b>@ 10 MHz</b>				<b>14 chs</b>
BGY66B	25 ± 0.5	-0.2 to +0.5	±0.2	20	-66 <sup>(3.2)</sup>
<b>Reverse Amplifier: 5 to 200 MHz Range</b>					
	<b>@ 10 MHz</b>				<b>22 chs<sup>(3.3)</sup></b>
BGY61	13.0 ± 0.5	-0.2 to +0.5	±0.2	20	-68
BGY65	18.5 ± 0.5	-0.2 to +0.5	±0.2	20	-68
BGY67	22.0 ± 0.5	-0.2 to +0.5	±0.2	20	-67
BGY67A	24.0 ± 0.5	-0.2 to +0.5	±0.2	20	-67
<b>Optical Receiver: 5 to 300 MHz Range</b>					
				(2.1)	
BGY67BO <sup>(1.2)</sup>	-	-	±0.3	15	-
BGY67BO/4M <sup>(1.2)(1.1)(1.8)</sup>	-	-	±0.3	14	-
BGY67BO/SC <sup>(1.2)(1.9)</sup>	-	-	±0.3	15	-
<b>Forward Amplifier: 40 to 450 MHz Range</b>					
BGY82, BGY84, BGY85, BGY84A, BGY85A, BGY86, BGY87, BGY87B, BGY88, BGY89; for more information see corresponding data sheets in this handbook.					

## Wideband Hybrid Amplifier Modules

## Selection guide

TYPE NUMBER	CROSS MODULATION (dB) MAX. notes: table 4	COMPOSITE 2nd ORDER BEAT (dB) MAX. notes: table 5	2nd ORDER BEAT (dB) MAX. notes: table 6	OUTPUT VOLTAGE (dBmV) MIN. notes: table 7	NOISE FIGURE (dB) MAX.	TOTAL DC CURRENT CONSUMPTION (mA) MAX.
<b>Reverse Amplifier: 5 to 75 MHz Range</b>						
	4 chs				@ 75 MHz	
BGY68	-60 <sup>(4.1)</sup>	–	-70 <sup>(6.1)</sup>	–	5.0	135
<b>Reverse Amplifier: 5 to 120 MHz Range</b>						
	14 chs				@ 120 MHz	
BGY66B	-54 <sup>(4.2)</sup>	–	-70 <sup>(6.2)</sup>	60.0 <sup>(7.1)</sup>	5.0	135
<b>Reverse Amplifier: 5 to 200 MHz Range</b>						
	22 chs <sup>(4.3)</sup>		(6.3)	(7.2)	(7.3)	@ 200 MHz
BGY61	-61	–	-72	67.0	64.0	7.0
BGY65	-61	–	-72	67.0	64.0	5.5
BGY67	-60	–	-67	67.0	64.0	5.5
BGY67A	-59	–	-67	67.0	64.0	5.5
<b>Optical Receiver: 5 to 300 MHz Range</b>						
			(6.4)			
BGY67BO <sup>(1.2)</sup>	–	–	-70	–	–	190
BGY67BO/4M <sup>(1.2)(1.1)(1.8)</sup>	–	–	-70	–	–	190
BGY67BO/SC <sup>(1.2)(1.9)</sup>	–	–	-70	–	–	190
<b>Forward Amplifier: 40 to 450 MHz Range</b>						
BGY82, BGY84, BGY85, BGY84A, BGY85A, BGY86, BGY87, BGY87B, BGY88, BGY89; for more information see corresponding data sheets in this handbook.						

## Wideband Hybrid Amplifier Modules

## Selection guide

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<b>Power Doublers</b>						
BGD102, BGD104, BGD108; for more information see corresponding data sheets in this handbook.						
<b>Forward Amplifier: 40 to 550 MHz Range</b>						
	@ 50 MHz	@ 550 MHz		(2.2)	77 chs <sup>(3.6)</sup>	
BGY580	12.5 ± 0.5	12.5 to 14.5	0.5 to 2.0	±0.2	18	-52
BGY583	14.0 ± 0.5	>14.5	0.2 to 1.5	±0.2	18	-59
BGY584	17.0 ± 0.5	17.6 to 19.0	0.5 to 2.0	±0.2	18	-56
BGY585	17.0 ± 0.5	17.6 to 19.0	0.5 to 2.0	±0.2	18	-59
BGY584A	18.2 ± 0.5	18.8 to 20.0	0.5 to 2.0	±0.2	18	-56
BGY585A	18.2 ± 0.5	18.8 to 20.0	0.5 to 2.0	±0.2	18	-59
BGY586	22.0 ± 0.5	22.0 to 24.0	0.2 to 1.5	±0.2	18	-53
BGY587	22.0 ± 0.5	22.0 to 24.0	0.2 to 1.5	±0.2	18	-57
BGY587B	27.0 ± 0.8	>27.5	0.5 to 2.5	±0.4	18	-57
BGY588	34.5 ± 1.0	35.0 to 37.0	0 to 2.5	±0.4	18	-57
<b>Power Doublers</b>						
BGD502	18.5 ± 0.5	18.8 to 20.8	0.2 to 2.2	±0.3	18	-65
BGD504	20.0 ± 0.5	20.2 to 22.2	0.2 to 2.2	±0.3	18	-64
BGD506	22.0 ± 0.5	>22.1	0 to 2.0	±0.3	18	-62
BGD508	36.0 ± 1.0	>36.5	0.2 to 2.2	±0.4	18	-62
<b>Forward Amplifier: 40 to 600 MHz Range</b>						
	@ 50 MHz	@ 600 MHz		(2.2)	85 chs <sup>(3.7)</sup>	
BGY681	12.5 ± 0.5	>12.7	0.7 to 2.2	±0.2	18	-52
BGY683	14.0 ± 0.5	>14.5	0.2 to 1.7	±0.2	18	-55
BGY685A	18.2 ± 0.5	>19.0	0.5 to 2.2	±0.2	18	-55
BGY685AD	18.5 ± 0.5	>19.0	0.2 to 2.2	±0.3	18	-62
BGY685AL	18.5 ± 0.5	>18.5	0.5 to 2.0	±0.3	18	-56
BGY687	21.5 ± 0.5	>22.0	0.8 to 2.2	±0.2	18/16	-54
BGY687B	27.0 ± 0.8	>27.8	0.8 to 2.8	±0.4	18	-53

## Wideband Hybrid Amplifier Modules

## Selection guide

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<b>Power Doublers</b>						
BGD102, BGD104, BGD108; for more information see corresponding data sheets in this handbook.						
<b>Forward Amplifier: 40 to 550 MHz Range</b>						
	<b>77 chs<sup>(4.6)</sup></b>	<b>77 chs<sup>(5.3)</sup></b>	<b>(6.7)</b>	<b>(7.5)</b>	<b>@ 550 MHz</b>	
BGY580	-59	-56	-70	59.0	8.5	200
BGY583	-61	-59	-72	61.5	8.5	240
BGY584	-59	-56	-68	58.5	7.0	200
BGY585	-62	-59	-70	61.0	8.0	240
BGY584A	-59	-55	-70	59.0	7.0	200
BGY585A	-62	-59	-72	61.5	8.0	240
BGY586	-55	-50	-62	58.5	6.5	200
BGY587	-58	-54	-66	61.0	7.0	240
BGY587B	-60	-57	-68	61.0	6.5	340
BGY588	-59	-57	-68	61.0	6.5	340
<b>Power Doublers</b>						
BGD502	-68	-62	-72	64.0	8.0	435
BGD504	-67	-60	-70	63.5	8.0	435
BGD506	-63	-55	-66	62.5	7.0	435
BGD508	-65	-60	-70	63.0	7.5	625
<b>Forward Amplifier: 40 to 600 MHz Range</b>						
	<b>85 chs<sup>(4.6)</sup></b>	<b>85 chs<sup>(5.4)</sup></b>	<b>(6.8)</b>	<b>(7.6)</b>	<b>@ 600 MHz</b>	
BGY681	-58	-57	-70	59.5	9.5	240
BGY683	-59	-57	-68	58.0	9.0	240
BGY685A	-60	-56	-70	60.0	8.5	240
BGY685AD	-60	-60	-70	62.0	6.0	250
BGY685AL	-55	-56	-70	60.0	5.0	250
BGY687	-54	-52	-66	58.0	6.5	240
BGY687B	-58	-54	-66	60.0	7.0	340

Wideband Hybrid Amplifier Modules

Selection guide

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<b>Power Doublers</b>						
BGD601	12.5 ± 0.5	>12.7	0.2 to 2.2	±0.3	18	-62
BGD602	18.5 ± 0.5	>19.0	0.2 to 2.2	±0.3	18	-62
BGD602D	18.0 ± 0.5	>18.5	0.2 to 2.2	±0.3	18	-68
<b>Forward Amplifier: 40 to 750 MHz Range</b>						
	@ 50 MHz	@ 750 MHz			(2.3)	110 chs <sup>(3.8)</sup>
BGY785A	18.5 ± 0.5	>18.5	0 to 2.0	±0.3	20	-53
BGY785AD	18.5 ± 0.5	>18.5	0.2 to 2.0	±0.5	20	-58
BGY785AD/8M <sup>(1.7)</sup>	18.5 ± 0.5	-	0.2 to 2.0	±0.5	20	-58
BGY787	21.5 ± 0.5	>22.0	0 to 1.5	±0.5	20	-53
BGY788	34.0 ± 0.5	>34	0.5 to 2.5	±0.5	20	-49
<b>Power Doublers</b>						
BGD702/702MI <sup>(1.4)</sup>	18.5 ± 0.5	>18.5	0 to 1.5	±0.5	20 <sup>(2.4)</sup>	-58
BGD702D	18.5 ± 0.5	>20.0	2.0 to 4.0	±0.5	20 <sup>(2.3)</sup>	-62
BGD702N	18.5 ± 0.5	>18.5	0.2 to 2.0	±0.25	20 <sup>(2.4)</sup>	-58
BGD704	20.0 ± 0.5	>20.0	0 to 2.0	±0.5	20 <sup>(2.4)</sup>	-57
BGD704N	20.0 ± 0.5	>20.0	0 to 2.0	±0.25	20 <sup>(2.4)</sup>	-57
<b>Forward Amplifier: 40 to 860 MHz Range</b>						
	@ 50 MHz	@ 860 MHz			(2.3)	49 chs <sup>(3.9)</sup>
BGY883	15.0 ± 0.5	>15.0	0 to 2.0	±0.3	20	-61
BGY885A	18.5 ± 0.5	-	0 to 2.0	±0.3	20	-61
BGY885B	20.0 ± 0.5	>20.0	0 to 2.0	±0.3	20	-60
BGY887	21.5 ± 0.5	>21.5	0.2 to 2.0	±0.3	20	-62
BGY887B	29.0 ± 0.5	>29.0	0.5 to 2.5	±0.5	20	-60
BGY888	34.0 ± 0.5	>34.0	0.5 to 2.5	±0.5	20	-60

## Wideband Hybrid Amplifier Modules

## Selection guide

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<b>Power Doublers</b>						
BGD601	-66	-60	-70	63.0	9.5	435
BGD602	-66	-60	-70	63.0	8.0	435
BGD602D	-61	-64	-76	66.0	7.0	440
<b>Forward Amplifier: 40 to 750 MHz Range</b>						
	<b>110 chs<sup>(4.6)</sup></b>	<b>110 chs<sup>(5.5)</sup></b>	<b>(6.9)</b>	<b>(7.7)</b>	<b>@ 750 MHz</b>	
BGY785A	-56	-53	-65	59.0	7.0	240
BGY785AD	-56	-58	-68	61.0	6.0	265
BGY785AD/8M <sup>(1.7)</sup>	-56	-58	-68	61.0	6.0	265
BGY787	-52	-53	-63	61.0	6.5	240
BGY788	-51	-52	-64	58.0	7.0	320
<b>Power Doublers</b>						
BGD702/702MI <sup>(1.4)</sup>	-62	-58	-68	61.0	8.5	435
BGD702D	-59	-62	-72	64.0	7.0	435
BGD702N	-62	-58	-68	61.0	8.5	435
BGD704	-61	-56	-66	60.5	8.5	435
BGD704N	-61	-56	-66	60.5	8.5	435
<b>Forward Amplifier: 40 to 860 MHz Range</b>						
	<b>49 chs<sup>(4.6)</sup></b>	<b>49 chs<sup>(5.6)</sup></b>	<b>(6.10)</b>	<b>(7.9)</b>	<b>@ 860 MHz</b>	
BGY883	-61	-61	-68	60.0 typ.	8.5	235
BGY885A	-61	-61	-70	59.0 typ.	8.0	240
BGY885B	-60	-60	-68	59.0 typ.	7.5	235
BGY887	-61	-61	-70	59.0	6.5	235
BGY887B	-60	-60	-70	58.5	6.5	340
BGY888	-59	-55	-65	58.0	7.0	340

Wideband Hybrid Amplifier Modules

Selection guide

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<b>Cascade Amplifiers</b>						
				(2.5)		
BGE884	17.0 ± 0.5	0.2 to 1.4	±0.3	20	–	
BGE885	17.0 ± 0.5	0.2 to 1.2	±0.5	14 <sup>(2.6)</sup>	–	
BGX881	12.5 ± 0.5	0.2 to 1.2	±0.3	20	–	
BGX885N	17.0 ± 0.5	0.2 to 1.4	±0.3	20	–	
<b>Power Doublers</b>						
					129 chs <sup>(3.9)</sup>	
BGD802/802MI <sup>(1.4)</sup>	18.5 ± 0.5	>18.5	0.2 to 2.0	±0.5	20 <sup>(2.3)</sup>	–54
BGD802N	18.5 ± 0.5	>18.5	0.2 to 2.0	±0.25	20 <sup>(2.3)</sup>	–54
BGD804	20.0 ± 0.5	>20.0	0.2 to 2.0	±0.5	20 <sup>(2.3)</sup>	–53
BGD804N	20.0 ± 0.5	>20.0	0.2 to 2.0	±0.25	20	–53
BGD885 <sup>(1.5)</sup>	17.0 ± 0.5	–	0.2 to 1.6	±0.5	20	–
<b>Optical Receiver</b>						
BGE887BO <sup>(1.2)</sup>	–	–	±0.5	11 <sup>(2.8)</sup>	–	
BGY847BO <sup>(1.2)</sup>	–	–	±0.5	11 <sup>(2.1)</sup>	–	
BGY887BO <sup>(1.2)</sup>	–	–	±0.5	11 <sup>(2.1)</sup>	–	
BGY887BO/FC <sup>(1.2)(1.6)</sup>	–	–	±0.5	11 <sup>(2.1)</sup>	–	
BGY887BO/SC <sup>(1.2)(1.9)</sup>	–	–	±0.5	11 <sup>(2.1)</sup>	–	
<b>Power Doubler: 40 to 900 MHz Range</b>						
	@ 50 MHz	@ 900 MHz		(2.3)	129 chs <sup>(3.9)</sup>	
BGD902 <sup>(1.1)</sup>	18.5 ± 0.5	20.0 ± 0.5	1.0 to 2.0	±0.3	20	–58
<b>Forward Amplifier: 40 to 1000 MHz Range</b>						
	@ 50 MHz	@ 1 GHz		(2.7)	110/150 chs <sup>(3.10)</sup>	
BGY1085A	18.5 ± 0.5	>18.5	0 to 2.0	±0.3	20	–53/–53 typ.



Wideband Hybrid Amplifier Modules

Selection guide

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<b>Cascade Amplifiers</b>								
			(6.11)	(7.8)	(7.9)	@ 350 MHz @ 860 MHz		
BGE884	–	–	–60 <sup>(6.12)</sup>	55.0	55.0	7.5	8.0	150
BGE885	–	–	–53	–	59.0	7.5	8.0	240
BGX881	–	–	–53	60.5	59.5	8.5	9.0	240
BGX885N	–	–	–53	61.0	60.0	7.5	8.0	240
<b>Power Doublers</b>								
	129 chs <sup>(4.6)</sup>	129 chs <sup>(5.6)</sup>						
BGD802/802MI <sup>(1.4)</sup>	–59	–56	–69 <sup>(6.10)</sup>	–	61.5	–	9.0	410
BGD802N	–59	–56	–69	61.5	61.5	–	–	410
BGD804	–61	–54	–67 <sup>(6.10)</sup>	–	60.0	–	7.5	410
BGD804N	–58	–54	–67	61.0	61.0	–	–	410
BGD885 <sup>(1.5)</sup>	–	–	–53	64.0	63.0	–	8.0	450
<b>Optical Receiver</b>								
BGE887BO <sup>(1.2)</sup>	–	–	–70 <sup>(6.4)</sup>	–	–	–	–	205
BGY847BO <sup>(1.2)</sup>	–	–	–70 <sup>(6.4)</sup>	–	–	–	–	205
BGY887BO <sup>(1.2)</sup>	–	–	–70 <sup>(6.4)</sup>	–	–	–	–	205
BGY887BO/FC <sup>(1.2)(1.6)</sup>	–	–	–70 <sup>(6.4)</sup>	–	–	–	–	205
BGY887BO/SC <sup>(1.2)(1.9)</sup>	–	–	–70 <sup>(6.4)</sup>	–	–	–	–	205
<b>Power Doubler: 40 to 900 MHz Range</b>								
	129 chs <sup>(4.6)</sup>	129 chs <sup>(5.6)</sup>	(6.10)	(7.9)		@ 50 MHz @ 900 MHz		
BGD902 <sup>(1.1)</sup>	–60	–58	–70	63.0	5.0	8.0	435	
<b>Forward Amplifier: 40 to 1000 MHz Range</b>								
	110/150 chs <sup>(4.7)</sup>	110/150 chs <sup>(5.7)</sup>	(6.13)	(7.10)	(7.11)	@ 750 MHz @ 1 GHz		
BGY1085A	–54/–54 typ.	–56/–56 typ.	–65/–68	60.0	59.0 typ.	7.0	7.5 typ.	240

# Wideband Hybrid Amplifier Modules

# Selection guide

## NOTES IN SELECTION GUIDE

**Table 1** Miscellaneous notes.

NOTE IN MAIN TABLE	
1.1	provisional data/advance information
1.2	module has a monomode optical input for wavelengths from 1290 to 1600 nm; PIN diode current-monitoring terminal; 1 meter SM pigtail, 9/125 µm spectral sensitivity: >0.85 A/W at 1310 nm, >0.9 A/W at 1550 nm.
1.4	the MI type has 'mirror image' pinning for simplified board layout when put in parallel with the standard type.
1.5	cascade
1.6	as BO but with the pigtail terminated by an FC/APC optical connector
1.7	frequency range 40 to 870 MHz
1.8	frequency range 40 to 400 MHz
1.9	as BO but with the pigtail terminated by an SC/APC optical connector

**Table 3** Measuring conditions for composite triple beat.

NOTE IN MAIN TABLE	MEASURED AT (MHz)	V <sub>o</sub> (dBmV)
3.1	25	50
3.2	67.25	48
3.3	175.25 (channel 7)	50
3.4	445.25 (channel H22)	46
3.5	433.25 (channel H20)	46; 36 channels
3.6	547.25 (channel 27)	44
3.7	595.25 (channel 35)	44
3.8	745.25	44
3.9	859.25	44
3.10	1st value; 745.25 MHz	44
	2nd value; 985.25 MHz	40

**Table 2** Return loss notes.

NOTE IN MAIN TABLE	RETURN LOSS
2.1	value listed is output return loss. Optical input return loss: >40 dB
2.2	>20 dB from 40 to 80 MHz >19 dB from 80 to 160 MHz >18 dB from 160 to 450 MHz, 550 MHz or 600 MHz as appropriate
2.3	>20 dB from 40 to 80 MHz >18.5 dB from 80 to 160 MHz >17 dB from 160 to 320 MHz >15.5 dB from 320 to 640 MHz >14 dB from 640 to 750 MHz, 860 MHz or 900 MHz as appropriate
2.4	>20 dB from 40 to 80 MHz >19 dB from 80 to 160 MHz >18 dB from 160 to 320 MHz >17 dB from 320 to 640 MHz >16 dB from 640 to 750 MHz
2.5	measured at 40 MHz, max. decrease 1.5 dB/octave up to 800 MHz; from 800 to 860 MHz, return loss is >10 dB
2.6	>14 dB from 40 to 450 MHz >10 dB from 450 to 860 MHz
2.7	measured at 40 MHz, max. decrease 1.5 dB/octave
2.8	value listed is output return loss. Optical input return loss: >45 dB

# Wideband Hybrid Amplifier Modules

# Selection guide

**Table 4** Measuring conditions for cross modulation.

NOTE IN MAIN TABLE	MEASURED AT (MHz)	V <sub>o</sub> (dBmV)
4.1	25	50
4.2	67.25	48
4.3	55.25 (channel 2)	50
4.4	55.25 (channel 2)	46
4.5	55.25 (channel 2)	46; 36 channels
4.6	55.25 (channel 2)	44
4.7	1st value; 55.25 (channel 2) for 110 channels; 750 MHz b/w	44
	2nd value; 55.25 (channel 2) for 150 channels; 1000 MHz b/w	40

**Table 5** Measuring conditions for composite second-order beat.

NOTE IN MAIN TABLE	MEASURED AT (MHz)	V <sub>o</sub> (dBmV)
5.1	25	50
5.2	446.25 (channel H22)	46
5.3	548.5 (channel 27)	44
5.4	596.5 (channel 35)	44
5.5	746.5 (channel 2)	44
5.6	860.5	44
5.7	1st value; 746.5 MHz	44
	2nd value; 986.5 MHz	40

**Table 6** Measuring conditions for 2nd order beat measured at f<sub>p+q</sub>.

NOTE IN MAIN TABLE	f <sub>p</sub> (MHz)	f <sub>q</sub> (MHz)	f <sub>p+q</sub> (MHz)	V <sub>o</sub> <sup>(1)</sup> (dBmV)
6.1	19	31	50	50
6.2	55.25	61.25	116.5	48
6.3	83.25	109.25	192.5	50
6.4	-70 dBc; 2 laser test (each laser: 0.5 mW; 40% modulation index)			
6.5	55.25 (channel 2)	343.25 (channel H5)	398.5 (channel H14)	46
6.6	55.25 (channel 2)	391.25 (channel H13)	446.5 (channel H22)	46
6.7	55.25 (channel 2)	493.25 (channel 18)	548.5 (channel 27)	44
6.8	55.25 (channel 2)	541.25	596.5	44
6.9	55.25 (channel 2)	691.25	746.5	44
6.10	55.25 (channel 2)	805.25	860.5	44
6.11	349.25	403.25	752.5	59
6.12	349.25	403.25	752.5	44
6.13	1st value; 55.25 (channel 2)	691.25	746.25	44
	2nd value; 55.25 (channel 2)	931.25	986.25	40

**Note**

1. V<sub>o</sub> = V<sub>p</sub> = V<sub>q</sub>.

## Wideband Hybrid Amplifier Modules

## Selection guide

**Table 7** Measuring conditions for output voltage<sup>(1)</sup>.

NOTE IN MAIN TABLE	f <sub>p</sub> (MHz)	f <sub>q</sub> (MHz)	f <sub>r</sub> (MHz)	f <sub>p+q-r</sub> (MHz)
7.1	111.25	118.25	120.25	109.25
7.2	35.25	42.25	44.25	33.25
7.3	187.25	194.25	196.25	185.25
7.4	440.25	447.25	449.25	438.25
7.5	540.25	547.25	549.25	538.25
7.6	590.25	597.25	599.25	588.25
7.7	740.25	747.25	749.25	738.25
7.8	341.25	348.25	350.25	339.25
7.9	851.25	858.25	860.25	849.25
7.10	740.25	747.25	749.25	738.25
7.11	980.25	987.25	989.25	978.25

**Note**

- All output voltages measured at f<sub>p+q-r</sub>, and for an intermodulation distortion of -60 dB (DIN 45004B, par. 6.3: 3 tone); V<sub>p</sub> = V<sub>o</sub>, V<sub>q</sub> = V<sub>o</sub> - 6 dB, V<sub>r</sub> = V<sub>o</sub> - 6 dB.

**General Remarks**

- All devices are cascode types except where indicated otherwise
- Source and load impedance of all devices is 75 Ω
- Characteristics specified at T<sub>mb</sub> = 30 °C and measured at 24 V DC supply
- Cross modulation and beats are flat-channel measurements, that is, measured with all channel outputs at the specified V<sub>o</sub>.

**CROSS-REFERENCE GUIDE FOR WIDEBAND HYBRID AMPLIFIER MODULES**

GAIN	FREQUENCY	PHILIPS	MOTOROLA
<b>Forward Amplifiers</b>			
12 dB	450 MHz	BGY80	MHW5122A
		BGY81	MHW5122A
	550 MHz	BGY580	MHW6122
		BGY581	MHW6122
600 MHz	BGY681		
14 dB	450 MHz	BGY82	MHW5142A
		BGY83	MHW5142A
	550 MHz	BGY582	MHW6142
		BGY583	MHW6142
	600 MHz	BGY683	
860 MHz	BGY883	MHW8142	
17 dB	450 MHz	BGY84	MHW5172A
		BGY85	MHW5172A
	550 MHz	BGY584	MHW6172
		BGY585	MHW6172
	600 MHz	BGY685	

## Wideband Hybrid Amplifier Modules

## Selection guide

GAIN	FREQUENCY	PHILIPS	MOTOROLA
<b>Forward Amplifiers (continued)</b>			
17 dB High slope	450 MHz	BGY85H/01	
18 dB	450 MHz	BGY84A	MHW5183
		BGY85A	MHW5182A
	550 MHz	BGY584A	MHW6182
		BGY585A	MHW6182
	600 MHz	BGY685A	MHW6182-6
		BGY685AD	
		BGY685AL	MHW6183
	750 MHz	BGY785A	MHW7182
BGY785AD			
860 MHz	BGY885A	MHW8182	
1000 MHz	BGY1085A	MHW9182	
20 dB	860 MHz	BGY885B	
22 dB	450 MHz	BGY86	
		BGY87	MHW5222A
	550 MHz	BGY586	
		BGY587	MHW6222
	600 MHz	BGY687	MHW6222-6
750 MHz	BGY787	MHW7222	
860 MHz	BGY887	MHW8222	
27 dB to 29 dB	450 MHz	BGY87B	MHW5272A
	550 MHz	BGY587B	MHW6272
	600 MHz	BGY687B	
	860 MHz	BGY887B	MHW8292
34 dB	450 MHz	BGY88	MHW5342A
	550 MHz	BGY588	MHW6342
	750 MHz	BGE788	
	860 MHz	BGY888	
36 dB	450 MHz	BGY89	MHW5382A
<b>Reverse Amplifiers</b>			
13 dB	5 to 200 MHz	BGY61	MHW1134
18 dB	5 to 200 MHz	BGY65	MHW1184
22 dB	5 to 200 MHz	BGY67	MHW1224
24 dB	5 to 200 MHz	BGY67A	MHW1244
25 dB	5 to 120 MHz	BGY66B	
30 dB	5 to 75 MHz	BGY68	

## Wideband Hybrid Amplifier Modules

## Selection guide

GAIN	FREQUENCY	PHILIPS	MOTOROLA
<b>Power Doublers</b>			
12 dB	600 MHz	BGD601	
17 dB	860 MHz	BGD885	CA922A
18 dB	450 MHz	BGD102	MHW5185B
	550 MHz	BGD502	MHW6185B
	600 MHz	BGD602	
		BGD602D	
	750 MHz	BGD702	MHW7185A
		BGD702D	
860 MHz	BGD802	MHW8185	
20 dB	450 MHz	BGD104	MHW5205
	550 MHz	BGD504	MHW6205
	750 MHz	BGD704	MHW7205A
	860 MHz	BGD804	
	900 MHz	BGD902	
22 dB	450 MHz	BGD106	MHW5225
	550 MHz	BGD506	MHW6225
36 dB	450 MHz	BGD108	
	550 MHz	BGD508	
<b>Optical Receivers</b>			
–	860 MHz	BGE887BO	
–		BGY847BO	
–		BGY887BO	
–	300 MHz	BGY67BO	
<b>Cascade Amplifiers</b>			
12 dB	860 MHz	BGX881	
17 dB	860 MHz	BGE884	
		BGE885	
		BGE885N	CA901
24 dB	860 MHz	BGE887	