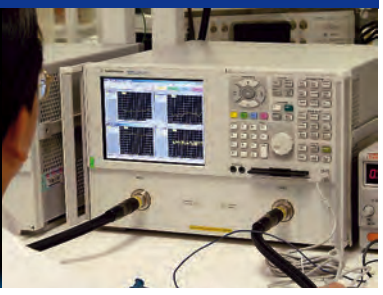
KRYTAR®

Ultra-Broadband High Performance
DC - 110 GHz



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Designed & Built
in the U.S.A.

ANNIVERSARY
50 Years
1975

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Directional Couplers

Directional Detectors

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Model	Low Level Sensitivity (µV/µW)	Frequency Sensitivity (dB)	Insertion Loss (dB Max)	Directivity (dB Min)	Max VSWR
1 - 4	101004006	6 ± 0.5	± 0.50				1.30	20	1.20
	101004010	10 ± 0.8					1.00		
	101004020	20 ± 0.5					0.80		
	101004030	30 ±0.5					0.5		
0.4 - 4	100404010	10 ± 0.5	± 0.50				1.10	16	1.20
	100404020	20 ± 0.8					0.75	20	
	100404030	30±1.0	±1.0				0.70	15	1.20
0.4 - 7.125	10040712506	6 ± 1.1	± 1.2				<2.0	>10	1.35
	10040712510	10 ± 1.2	± 1.2				<1.4	>15	1.35
	10040712516	16 ± 1.2	± 1.0				<0.9	>15	1.3
	10040712520	20 ± 1.0	± 1.2				<0.9	>15	1.2
	10040712530	30 ± 0.7	± 1.2				<0.80	>15	1.35
2 - 8	102008006	6 ± 0.5	± 0.25	202008006	100	± 0.30	1.60	20	1.20
	102008010	10 ± 0.5		202008010	40		0.75		
	102008020	20 ± 1.0		202008020	4		0.35		
	102008030	30±1.0	±1.0				0.35	16	1.3
0.5 - 8	158006	6 ± 1.1	± 0.60	158006S	100	± 0.80	1.70	15	1.35
	158010	10 ± 1.0		158010S	40		1.30		
	158016	16 ± 1.0		158016S	10	± 0.60	0.85		
	158020	20 ± 1.0		158020S	4		0.80		
	158030	30 ± .80					0.80	16	1.35
0.3 - 8	100308006	6 ± 1.1	± 1.20				2.0	10	1.4
	100308010	10 ± 1.0	± 1.20				1.30	20	1.18
	100308016	16 ± 1.2	± 1.00				1.00		1.15
	100308020	20 ± 1.0	± 1.20				0.85		
	100308030	30 ± 0.7	± 1.20				0.85		

Up to 18 GHz →

Directional Couplers

Directional Detectors

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Model	Low Level Sensitivity (µV/µW)	Frequency Sensitivity (dB)	Insertion Loss (dB Max)	Directivity (dB Min)	Max VSWR
2 - 8.6	102008616	16 ± 1.0	± 0.25				0.50	20	1.30
0.6-12	100612020	20 ± 1.0	± 1.20				1.00	15	1.2
7 - 12.4	120706	06 ± 0.5	± 0.30				1.80	15	1.35
	120710	10 ± 0.5		120710S	40	± 0.40	0.90		
	120720	20 ± 1.0		120720S	4		0.50		
	120730	30 ± 1.0					0.50		
4 - 12.4	120406	06 ± 0.5	± 0.30				1.80	15	1.35
	120410	10 ± 0.5		120410S	40	± 0.40	0.90		
	120420	20 ± 1.0		120420S	4		0.50		
	120430	30 ± 1.0					0.50		
1 - 12.4	1211	10 ± 0.5	± 0.30	1211S	40	± 0.40	1.10	15	1.35
	101012420	20 ± 1.2	± 1.0				0.85	12	1.3
	101012430	30 ± 1.0	± 1.0				0.85		
0.3 - 12.4	100312406	6 ± 1.1	± 1.20				2.00	10	1.4
	100312410	10 ± 1.0	± 1.20				1.35	15	1.35
	100312416	16 ± 1.2	± 1.00				1.2		1.3
	100312420	20 ± 1.0	± 1.20				1.0		1.20
	100312430	30 ± 0.7	± 1.20				1.00		1.35
7.125 -15.35	107125-1535-10	10 ± 0.5	± 0.30				1.1	13	1.4
	107125-1535-20	20 ± 1.0					0.7	14	
1 - 16	101016010	10 ± 0.5 dB	± 0.35				1.00	16	1.3
	101016020	20 ± 1.0 dB					0.65		
12.4 - 18	181206	06 ± 0.5	± 0.30				1.90	15	1.35
	181210	10 ± 0.5		181210S	40	± 0.40	1.00		
	181220	20 ± 1.0		181220S	4		0.60		
	181230	30 ± 1.0	± 0.70						
1 - 18	18106	6 ± 0.8	± 0.8				2.5	12	1.6
	1821	10 ± 0.5	± 0.30, 1-12.4 GHz ± 0.40, 1-18 GHz	1821S	40	± 0.70	1.30	16	1.35
	1820	16 ± 0.5		1820S	10		0.90		
	180120	20 ± 1.0					0.95		
	18130	30 ± 1.0	± 1.20				1.00	14	1.35

Up to 20 GHz →

Directional Couplers

Directional Detectors

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Model	Low Level Sensitivity (µV/µW)	Frequency Sensitivity (dB)	Insertion Loss (dB Max)	Directivity (dB Min)	Max VSWR
2 - 18	1813	13 ± 0.5	± 0.50				1	12	1.3
	1815	6 ± 1.0	± 0.35	1815S	100	± 0.70	1.90	16	1.30
	1822	10 ± 0.5		1822S	40		1.10		
	1818	16 ± 0.5		1818S	10		0.75		
	1824	20 ± 1.0		1824S	4		0.70		
	1825	30 ± 1.0	± 0.5				0.9	12	1.5
0.3 - 18	100318006	6 ± 1.1	± 1.20				2.25	10	1.40
	100318010	10 ± 1.0					1.60	12	1.40
	100318020	20 ± 1.0					1.4	15	1.40
	100318030	30 ± 0.7					1.40	12	1.40
0.5 - 18.5	1856	6± 1.0	± 1.0				2.5	12	1.35
	1851	10 ± 1.0	± 0.70	1851S	40	± 1.0	1.50		
	1850	16 ± 1.0		1850S	10		1.10		
	1852	20 ± 1.0		1852S	4		1.10		
	1853	30± 1.0	± 1.0				1	12	1.45
0.4 - 18.5	100418510	10 ± 2	± 1.5				<1.5	>12	1.35
	100418516	16 ± 2.0	± 1.4						
4 - 20	104020006	6 ± 0.5	± 0.30	204020006	100	± 0.60	1.90	15	1.35
	104020010	10 ± 0.5		204020010	40		1.00		
	104020020	20 ± 1.0		204020020	4		0.60		
	104020030	30 ± 1.0	± 0.70				0.60		
2 - 20	102020006	06 ± 1.0	± 0.80				2.5	12	1.6
	102020010	10 ± 0.5	± 0.30	202020010	40	± 0.60	1.30	16	1.35
	102020013	13 ± 0.5	± 0.50				1.1	12	
	102020016	16 ± 0.5	± 0.30	202020016	10		1.00	>16	
	102020020	20 ± 1.0		202020020	4		0.90		
	102020030	30 ± 1.0	± 0.5					12	1.5
1.7 - 20	101720010	10 ± 1.0	± 0.5				1	12	1.45
	101720013	13 ± 1.0	± 1.20				1.1	14	1.35
	1017200020	20 ± 1.8	± 1.8				<1.0	>10	1.45
	1017200030	30 ± 1.8	± 1.8				<1.0	>10	1.45
	2618	16 ± 1.0	± 0.40, 1.7-18 GHz ± 0.55, 1.7-20 GHz	2618S	10	± 0.70,1.7-18 GHz ± 0.90,18-20 GHz	0.80, 1.7-18 GHz 1.00, 18-20 GHz	15,1.7-18 GHz 13,18-20 GHz	1.35,1.7-18 GHz 1.45,18-20 GHz
1 - 20	101020006	6 ± 0.8	± 0.80				2.5	12	1.6
	101020010	10 ± 0.5	± 0.35	201020010	40	± 0.70	1.40	16	1.35
	101020016	16 ± 0.5		201020016	10		1.10		
	101020020	20 ± 1.0		201020020	4		1.00		
0.5 - 20	152006	6 ± 1.0	± 1.0				2.1	12	1.35
	152010	10 ± 1.0	± 0.80	152010S	40	± 0.80	1.65	15	
	152013	13 ± 1.0		152013S	20		1.40		
	152020	20 ± 1.0					1.20		
	152030	30 ± 1.8	± 1.8				1.35	10	

Up to 40 GHz →

Directional Couplers

Directional Detectors

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Model	Low Level Sensitivity (µV/µW)	Frequency Sensitivity (dB)	Insertion Loss (dB Max)	Directivity (dB Min)	Max VSWR
7 - 24	107024010	10 ± 0.5	± 0.3				1.2	13	1.4
	107024020	20 ± 1.0					0.8	14	1.4
18 - 26.5	262206	6 ± 1.0	± 0.30				1.60	13	1.40
	262210	10 ± 0.5		262210S	40	± 0.40	1.30	14	
	262213	13 ± 1.0	± 1.0				1.20	13	
	262220	20 ± 1.0	± 0.30	262220S	4		0.80	14	
	262230	30 ± 1.0	± 0.35						
6 - 26.5	106026506	06 ± 1.0	± 0.50				1.60	14	1.45
	106026510	10 ± 0.5	± 0.30	206026510	40	± 0.80	1.30	13	1.40
	106026513	13 ± 1.0	± 1.00				1.20		
	106026520	20 ± 1.0	± 0.30	206026520	4		0.80	14	
	106026530	30 ± 1.0	30 ± 1.0	206026530	0.40	± 1.00	0.70		1.45
1.7 - 26.5	2611	10 ± 1.0	± 0.60	2611S	40		1.50	14	1.45
	2613	13 ± 1	±1.2				1.20		1.50
	2616	16 ± 1.0	16 ± 1.0	2616S	10		1.20		1.45
	2621	20 ± 1.0	± 0.60				1.2	14	
	2631	30 ± 1.0	± 1.00				1.2	14	
1 - 26.5	2606	6 ± 1.0	± 0.50				1.60	13	1.50
	2610	10 ± 1.0		2610S	40	± 1.00		14	1.40
	2620	20 ± 1.0		2620S	4		1.20		
	2630	30 ± 1.5	± 1.5				1.2	12	1.4
0.5 - 26.5	152606	6 ± 1.0	± 1.25				2.6	13	1.6
	152610	10 ± 1.0	± 1.00				1.50		1.45
	152613	13 ± 1.0		152613S	20	± 1.30			
	152616	16 ± 1.0	± 1.20				1.40		
	152620	20 ± 1.0	± 1.50				1.35		
	152630	30 ± 1.8	± 1.8					10	
26.5 - 40	264006 264006K	6 ± 0.7	± 0.65				2.40	10	1.80
	264010 264010K	10 ± 0.7	± 0.40	264010S	40	± 0.50	1.70	12	1.70
	264020 264020K	20 ± 1.0		264020S	4		1.30		
	264030 264030K	30 ±1.0	±0.5						
18 - 40	184010 184010K	10 ± 0.7	± 0.40	184010S	40	± 0.50	1.70	12	1.70
	184020 184020K	20 ± 1.0		184020S	4		1.30		
	184030 184030K	30 ±2.0	± 0.70						

Up to 50 GHz →

Directional Couplers

Directional Detectors

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Model	Low Level Sensitivity (µV/µW)	Frequency Sensitivity (dB)	Insertion Loss (dB Max)	Directivity (dB Min)	Max VSWR
10 - 40	110040010 110040010K	10 ± 0.7	± 0.40	210040010 210040010K	40	± 0.90	1.70	10	1.70
	110040020 110040020K	20 ± 1.0		210040020 210040020K	4		1.30		
	110040030 11004000K	30 ± 1.2	±1.2				1.2	12	1.70
6 - 40	106040006 106040006K	6 ± 1.5	± 0.80				2.2	10	1.60
	106040010 106040010K	10 ± 0.80	± 0.60				1.8	12	
	106040020 106040020K	20 ± 1.0	± 0.5				1.2		
	106040030 106040030K	30 ± 1.8	± 1.6						
2 - 40	102040006 102040006K	6 ± 1.52	± 1.00				3.50	11	1.70
	102040010 102040010K	10 ± 1.0	± 0.40,2-20GHz ± 0.70,2-40GHz				1.20, 2-20GHz 1.80, 20-40GHz		
	102040013 102040013K	13 ± 1.0		202040013 202040013K	20	± 1.40	1.00, 2-20GHz 1.70, 20-40GHz		
	102040016 102040016K	16 ± 1.0		202040016 202040016K	10	± 0.70,2-20GHz ±1.40,2-40GHz	0.90, 2-20GHz 1.60, 20-40GHz		
	102040020 102040020K	20 ± 1.0					0.80, 2-20GHz 1.50, 20-40GHz		
	102040030 102040030K	30 ± 1.0	± 1.0						1.50, 2-20 GHz 1.70, 20-40 GHz
1 - 40	101040006 101040006K	6 ± 1.0	± 1.52				2.50,1-20GHz 3.50, 20-40GHz	10	1.7
	101040010 101040010K	10 ± 1.0	± 1.20	201040010 201040010K	40	± 1.70	2.00		
	101040013 101040013K	13 ± 1.0		201040013 201040013K	20		1.80		
	101040016 101040016K	16 ± 1.0					1.5		
	101040020 101040020K	20 ± 1.0					0.85,1-20GHz 1.50, 20-40GHz		
	101040030 101040030K	30 ± 1.8	± 1.5, 1-20 GHz ± 1.5, 20-40 GHz				1.5		
10 - 46	110046006 110046006K	6 ± 0.7	± 0.70				2.40	10	1.80
	110046010 110046010K	10 ± 0.7	± 0.50				1.90		
	110046020 110046020K	20 ± 1.0					1.50		
	110046030 110046030K	30 ± 2.0	± 2.0				1.5		
2 - 46	102046013	13 ± 1.0	± 0.60,2-26.5GHz ± 0.80,2-46GHz				1.80	13, 2-26.5GHz 10,26.5-46GHz	1.50, 2-26.5GHz 1.80,26.5-46GHz
26.5 - 50	265006	6 ± 1.0	± 0.50				2.4	10	1.80
	265010	10 ± 0.7					1.90		
	265020	20 ± 1.0					1.50		
	265030	30 ± 2.0	± 2.0						

Up to 110 GHz →

Directional Couplers

Directional Detectors

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Model	Low Level Sensitivity (µV/µW)	Frequency Sensitivity (dB)	Insertion Loss (dB Max)	Directivity (dB Min)	Max VSWR
18 - 50	195006	6 ±1.0	±1.0				2.4	8	1.80
	195010	10 ± 0.7	± 0.50				1.90	10	
	195020	20 ± 1.0					1.50		
	195030	30 ± 2.0	± 2.0						
10 - 50	110050006	6 ± 0.7	± 0.50				2.40	10	1.80
	110050010	10 ± 0.7					1.90		
	110050020	20 ± 1.0					1.50		
	110050030	30 ± 2.0	± 2.0						1.9
4-50	104050006	6 ± 2	± 2.0				2.8	>10	1.8
	104050010	10 ± 1	± .80				2	>10	1.8
	104050013	13 ± 1	± .8				1.8	>10	1.8
	104050016	16 ± 1	± 0.8				1.7	>10	1.8
	104050020	20 ± 1.2	± 1.25				1.7	>10	1.7
2 - 50	102050006	6±2.0	± 2.0				2.80	10	1.80
	102050010	10 ± 1.0	± 0.80	202050010	40	± 3.30	2.00		
	102050013	13 ± 1.0		202050013	20		1.80		
	102050016	16 ± 1.0		202050016	10		1.70		
	102050020	20 ± 1.2	± 1.25						
	102050030	30 ± 2.0	±2.0				1.5		
1 - 50	101050010	10 ± 1.2	± 1.25				2.9	10	1.8
	101050013	13 ± 1.0	± 1.00				1.60, 1-26.5GHz 1.90,26.5-50GHz		1.50, 1-26.5GHz 1.80,26.5-50GHz
	101050016	16 ± 1.5	± 1.5				2.5	10	1.5
	101050020	20± 1.5	± 2.0						1.75
	101050030	30± 2.2	± 2.2				2		1.7
1 - 65	101065010	10± 1.5,1-30 GHz 10± 2.0,1-65 GHz	± 1.2 dB,1.0-30 GHz ± 1.8 dB,30-65 GHz				3.5	8	1.9
	101065013	13 ± 1.5	± 1.00,1-30 GHz ± 2.00,30-65 GHz				3.5	7.2	1.2,1-30 GHz 1.9, 30-65 GHz
	101065016	16 ± 2.0	± 1.2, 1- 32 GHz ±1.5, 32-65 GHz				2.8	10.0	1.6
	101065020	20± 2.0 dB to 50 GHz 20 ±4 dB to 65 GHz	± 2 to 50 GHz ±4.0 to 65 GHz				3.00	8	1.9
	101065030	30 ± 3.0	± 1.25, 1-30 GHz ± 3.20, 30-65 GHz				2.5	10.0	1.7
10 - 67	110067006	6 ± 2.5	± 0.75 to 50 GHz ± 1.50 to 67 GHz				4.40	7.25	1.8 to 50 GHz 2.3 to 67 GHz
	110067010	10 ± 1.5	± 2.00				2.8	7.25	1.9
	110067016	16 ± 1.1	± 2.00				1.95	7.25	2.00
	110067020	20 ± 1.5	± 2.0				1.8	7.25	1.9
	110067030	30 ± 1.5	± 1.5				1.7	7.25	1.9
6-67	106067006	6 ± 2.5	± 1.5				4.4	10	1.8
	106067010	10 ± 1.5	± 2.0				2.8	7.25	1.9
	106067016	16 ± 1.1	± 2.0				1.95	7.25	1.9
	106067020	20 ± 1.5	± 2.0				1.8	7.25	1.9
	106067030	30 ± 1.5	± 1.5				1.7	7.25	1.9
24 - 71	124071010	10 ± 1.5	± 1.25				5	7	2.5
50 - 110	1500110010	10 ± 1.8	± 1.8				5.5	7	2.5
10 - 110	1100110010	10 ± 1.8	±1.25, 10 - 90 GHz ±1.80, 90 -110 GHz				5.5	10,10 - 55 GHz 7,55 - 110 GHz	1.8, 10-50GHz 2.5, 50-110GHz

DUAL DIRECTIONAL COUPLERS

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Insertion Loss (dB Max)	Directivity (dB Min)	Max VSWR
1 - 4	501004020	20 ± 1.0	± 0.5	0.70	20	1.2
0.7-6.3	500706310	10 ± 1.0	± 0.60	2.1	15	1.35
0.5 - 8	500508010	10 ± 1.0	± 0.60	2.30	15	1.35
2 - 8	502008020	20 ± 0.5	± 0.5	0.85	15	1.25
0.7-14	500714010	10 ± 1.0	± 0.85	2.7	12	1.4
	500714020	20 ± 1.	± 0.80	1.5	14	1.4
2 - 18	501822	10 ± 1.0	± 0.50	2.00	15	1.35
	501818	16 ± 1.0		1.40		
0.5 - 20	500520010	10 ± 1.0	± 0.85	3.0	12	1.40
	500520020	20 ± 1.2		2.0		
4 - 20	504020006	6 ± 0.8	± 0.50	4.0	12	1.35
	504020010	10 ± 1.25	± 0.80	2.00	15	1.40
	504020020	20 ± 1.0		1.25		
	504020030	30 ± 1.0		1.00	12	
2 - 20	502020030	30 ± 1.0	± 0.80	1.30	14 to 12.4 GHz 12 to 20 GHz	1.40
1 - 20	501820	10 ± 1.0	± 0.50	2.80	15	1.40
1 - 40	501040010	10 ± 1.5	± 2.00	2.20, 20 GHz	15	1.50 to 20 GHz
	501040010K			2.80, 40 GHz		1.80 to 40 GHz
	501040020	20 ± 1.0	± 0.15	2.0	10	1.8
	501040020K					
10 - 46	510046010	10 ± 1.8	± 1.0	2.8	10	1.80
26.5 - 50	526550010			3.0		
10 - 50	510050010					
1 - 50	501050013	13 ± 1.0	± 1.5	4.4	10	1.7
1-65	101065010	10± 1.5 dB,1-30 GHz 10± 2.0 dB,1-65 GHz	± 1.2 dB, 1.0-30 GHz ± 1.8 dB, 30-65 GHz	3.5	8	1.9
1 - 65	501065013	13 ± 2.0	± 1.5 dB, 1-50 GHz ± 2.5 dB, 1-65 GHz	6.5	10 dB, 1-50 GHz 7 dB, 50-65 GHz	1.8

3 dB 90° HYBRID COUPLERS

Frequency Range (GHz)	Model	Amplitude Imbalance (db)	Phase Imbalance (Degrees)	Isolation (dB Min)	Maximum VSWR	Insertion Loss (dB Max)
0.5 - 4.0	3005040	± 0.70	± 5	18	1.35	1.20
1 - 4	3010040	± 0.60	± 6	17	1.30	1.00
0.5 - 7	3005070	± 0.40	± 5	19	1.30	1.30
0.4-7.125	300407125	± 1.0	± 5	19	1.3	1.8
2 - 8	3020080	± 0.35	± 3	19	1.25	0.65
1 - 12.4	1230	± 0.40	± 7	20	1.30	1.40
7.125 - 15.35	307215-1535	± 0.40	± 5	15	1.45	0.9
2 - 18	1830	± 0.40	± 7	17	1.35	1.40
1.7 - 18	3017180	± 1.50	± 10	15	1.75	3.20
1.4 - 18	3014180	± 1.00	± 10	12	1.70	2.70
1 - 18	1831	± 0.50	± 10	17	1.35	2.00
6 - 20	3060200	± 0.40	± 5	14	1.45	1.00
7 - 24	3070240	± 1.2	± 12	15	1.8	2
10 - 26.5	3100265K	± 0.55	± 7	15	1.61	1.30
1.7 - 26.5	3017265	± 1.50	± 10	14	1.85	3.40
1.4 - 26.5	3014265	± 1.20	± 12	12	1.80	3.00
1.4 - 32	3014320	± 1.55	± 12	12	1.90	3.50
5 - 36	3050360K	± 1.50	± 15	11	1.80	2.80
1.7 - 36	3017360K	± 1.70	± 12	12	1.85	4.35
10 - 40	3100400 3100400K	± 0.70	± 10	12	1.80	2.00
4 - 44	3040440	± 1.2	± 12	13 dB 4-30GHz 8 dB 30-44 GHz	1.9	3.2

3 dB 180° HYBRID COUPLERS

Frequency Range (GHz)	Model	Amplitude Imbalance (db)	Phase Imbalance (Degrees)	Isolation (dB Min)	Maximum VSWR	Insertion Loss (dB Max)
0.5 - 4.0	4005040	±0.70	±15	14	1.35	2.00
0.5 - 7.0	4005070	±0.60	±10	16	1.40	2.80
0.4-7.125	400407125	±0.7	±10	15	1.4	2.9
2 - 8	4020080	±0.30	±8	18	1.40	1.10
4 - 12.4	4040124	±0.40	±8	17	1.60	0.90
1 - 12.4	4010124	±0.40	±10	17	1.60	2.10
2 - 18	4020180	±0.60	±14	15	1.70	2.00
1 - 18	4010180	±0.60	±12	15	1.70	2.90
7.125 - 15.35	407125-1535	±0.60	±8	16	1.6	1.1
6 - 20	4060200	±0.60	±10	15	1.70	1.20
7 - 24	4070240	±0.70	±12	14	1.7	1.5
6 - 26.5	4060265	±0.70		14	1.70	1.60
1 - 26.5	4010265	±1.00 to 20 GHz ±1.50 to 26.5 GHz	±16	15	1.80 to 20 GHz 1.95 to 26.5 GHz	3.0 to 20 GHz 3.6 to 26.5 GHz
3 - 32	4030320 4030320K	±1.0	14	18	1.8	3.5
3 - 36	4030360 4030360K	±1.2	18	18	1.8	4
10 - 40	4100400 4100400K	±1.00	±12	12	1.80	1.70

2-WAY POWER DIVIDERS

* WILKINSON TYPE

Frequency Range (GHz)	Model	Band Segments	Maximum VSWR		Insertion Loss (dB)	Isolation (dB)	Amplitude Tracking (dB)	Phase Tracking (Degrees)
			In	Out				
2 - 8	6020080*	2 - 8	1.45		0.8	19.5	0.25	5
0.4-7.125	600407125	0.4-7.125	1.6		15	15	±0.2	± 4
0.5-10	6005100	0.5-10	1.4		1.2	14	±0.2	± 4
7.125-15.35	607125-1535	7.125-15.35	1.5		1	20	±0.3	± 5
2 - 18	6020180	2 - 18	1.45		1.10	19	0.3	6
2-20.0	6020200	2-20.0	1.5		1.2	19	±0.40	± 8
1 - 18	6010180	1 - 18	1.45		1.20	19	0.3	6
0.5 - 18	6005180	0.5 - 18	1.45		1.50	19	0.3	6
7 - 24	6070240	7 - 24	1.6		1.25	18	±0.4	± 6
4-26.5	6040265	4-26.5	±1.45 (4-18 GHz) ±1.6(18-26.5 GHz		19 (4-18 GHz) 18(18-26.5 GHz)	±0.3 (4-18 GHz) ±0.58-2.5 GHz)	±0.3 (4-18 GHz) ±0.5(18-26.5 GHz)	±6 (4-18.0 GHz) ±10 (18-26.5 GHz)
2 - 26.5	6020265	2 - 18	1.45		1.10	19	0.3	6
		18 - 26.5	1.60		1.40	18	0.5	10
1 - 26.5	6010265	1 - 18	1.45		1.20	19	0.3	6
		18 - 26.5	1.60		1.60	21	0.5	10
0.5 - 26.5	6005265	0.5 - 18	1.45		1.50	19	0.3	6
		18 - 26.5	1.60		1.90	19	0.5	10
26.5 - 40	6265400	26.5-40	1.90		1.90	14.5	0.38	8
	6265400K							
18 - 40	6180400	18-40	1.90	2.10	2.10	14.0	0.5	8
	6180400K		1.90		1.90	14.5		
10 - 40	6100400	10-40	1.90	2.10	2.10	14.0	0.5	8
	6100400K		1.90		1.90	14.5		
4-40	6040400	4-40	2.1		2.1	14	±0.05	± 8
6 - 40	6060400	6-40	1.90	2.10	2.10	14.0	0.5	8
	6060400K		1.90		1.90	14.5		
3 - 40	6030400	3-40	1.90	2.10	2.10	14.0	0.5	8
	6030400K		1.90		1.90	14.5		
1-40	6010400	1.20	1.65	1.50	2.5	14	0.6	7
	6010400K	20-40	1.85	1.70				14
3 - 45	6030450	3 - 36	2.3	1.80	2.10	14	0.5	10
		36 - 45		2.50	2.80		0.7	14

MLDD 4-WAY POWER DIVIDERS

Frequency Range (GHz)	Model	Maximum Input VSWR	Maximum Output VSWR	Insertion Loss (dB)	Isolation (dB)	Amplitude Tracking (dB)	Phase Tracking (Degrees)
7.125-15.35	707125-1535	1.7	1.7	1.9	18	0.5	10
2 - 18	7020180	1.70	1.50	2.00	16	0.6	10
1 - 18	7010180	1.70	1.50	3.00	16	0.8	10
0.5 - 18	7005180	1.70	1.50	4.00	16	1.0	10
7 - 24	7070240	1.80	1.80	2.4	16	0.5	12
2 - 26.5	7020265	1.90	1.70	2.30	16	1.0	15
1 - 26.5	7010265	1.90	1.70	3.30	16	1.0	15
0.5 - 26.5	7005265	1.80	1.70	4.30	16	1.2	15
3 - 40	7030400	1.90 to 32 GHz 2.50 to 40 GHz	1.70 to 32 GHz 2.3 to 40 GHz	3.00 to 32 GHz 3.60 to 40 GHz	13	0.5	11 to 32 GHz 15 to 40 GHz
	7030400K						
1 - 40	7010400	1.80	1.80	6.5	11	1.5	22
	7010400K						

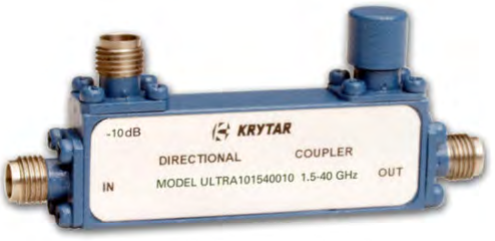
MLDD 8-WAY POWER DIVIDERS

Frequency Range (GHz)	Model	Maximum Input VSWR	Maximum Output VSWR	Insertion Loss (dB)	Isolation (dB)	Amplitude Tracking (dB)	Phase Tracking (Degrees)
2 - 18	8020180	2.00	1.75	5.5	17	1.0	15
1 - 18	8010180	2.10	1.75	5.5	17	1.0	15

COAXIAL TERMINATIONS

Frequency Range	Model	Maximum VSWR	Connector	Dimensions
DC - 20 GHz	T1M	1.05	3.5 mm Male	0.80” x 0.36” dia.
DC - 20 GHz	T1F	1.07	3.5 mm Female	0.73” x 0.36” dia.
DC - 26.5 GHz	T2M	1.09	3.5 mm Male	0.80” x 0.36” dia.
DC - 26.5 GHz	T2F	1.11	3.5 mm Female	0.73” x 0.36” dia.
DC - 40 GHz	T3M	1.20	2.4 mm Male	0.84” x 0.36” dia.
DC - 40 GHz	T3MK	1.20	2.92 mm Male	0.85” x 0.36” dia.
DC - 40 GHz	T3FK	1.20	2.92 mm Female	0.80” x 0.36” dia.
DC - 50 GHz	T4M	1.25	2.4 mm Male	0.84” x 0.36” dia.
DC - 67 GHz	T5M	1.20, DC-40GHz 1.43, 40-67GHz	2.4 mm Male	0.84” x 0.36” dia.
DC - 67 GHz	T5MV	1.2, DC-40 GHz 1.43, 40-67 GHz	1.85 mm Male	0.82” x 0.36” dia.

ULTRA+ DIRECTIONAL COUPLERS



KRYTAR ULTRA+ products offer even higher performance and tighter specifications.

Model #	Freq min (GHz)	Freq max (GHz)	Nominal Coupling	Insertion Loss (dB) EXCLUDE / INCLUDE COUPLED POWER	Directivity (dB)	VSWR (max) mainline/ secondary
ULTRA101540010	1.5	40	10 ±0.5 dB	<1.29/<1.75	>10	1.6/1.7
ULTRA101540010K	1.5	40	10 ±0.5 dB	<1.29/<1.75	>10	1.6/1.7
ULTRA102040013	2	40	13 ±0.5 dB	<1.4/<1.42	>11	1.5/1.7
ULTRA102040013K	2	40	13 ±0.5 dB	<1.4/<1.42	>11	1.5/1.7
ULTRA102040016	2	40	16 ±0.5 dB	<1.01/<1.12	>11	1.5/1.7
ULTRA102040016K	2	40	16 ±0.5 dB	<1.01/<1.12	>11	1.5/1.7
ULTRA102040020	2	40	20 ±0.5 dB	<1.00/<1.05	>11	1.5/1.7
ULTRA102040020K	2	40	20 ±0.5 dB	<1.00/<1.05	>11	1.5/1.7
ULTRA152010	0.5	20	10 ±0.5 dB	<0.94/<1.40	>15	1.30/1.35
ULTRA152020	0.5	20	20 ±0.5 dB	<0.96/<1.00	>15	1.25/1.35
ULTRA101020010	1	20	10 ±0.5 dB	<0.64/<1.1	>17	1.20/1.35
ULTRA102020016	2	20	16 ±0.5 dB	<0.59/<0.7	>16	1.28/1.35
ULTRA102020020	2	20	20 ±0.65 dB	<0.75/<0.8	>16	1.18/1.35

ULTRA+ 90 DEGREE HYBRIDS

KRYTAR ULTRA+ products offer even higher performance and tighter specifications.

Model #	Freq (min) GHz	Freq (max) GHz	Amplitude Imbalance (dB)	Phase Imbalance (degrees)	Isolation (dB)	VSWR (max)	Insertion Loss (dB)
ULTRA3100400	10	40	± 1.0	± 7	>14	1.6	<1.75
ULTRA3100400K	10	40	± 1.0	± 7	>14	1.6	<1.75
ULTRA3014320	1.4	32	± 1.50	± 8	>14	1.8	<3.0
ULTRA3060200	6	20	± 0.38	± 4	>18	1.38	<0.7
ULTRA1831	1	18	± 0.48	± 5	>19	1.32	<1.8
ULTRA1830	2	18	± 0.30	± 4	>17	1.35	<1.2
ULTRA3005070	0.5	7	± 0.38	± 3	>20	1.3	<1.2
ULTRA3005040	0.5	4	± 0.60	± 4	>18	1.35	<1.3
ULTRA3010040	1	4	± 0.50	± 4	>20	1.25	<0.9

ULTRA+ 180 DEGREE HYBRIDS

KRYTAR ULTRA+ products offer even higher performance and tighter specifications.

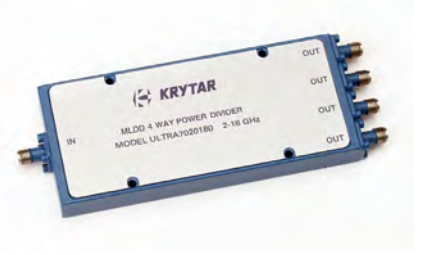
Model #	Freq (GHz) min	Freq (GHz) max	Amplitude Imbalance (dB)	Phase Imbalance (degrees)	Isolation dB	VSWR (max)	Insertion Loss (dB)
ULTRA4100400	10	40	±0.9	±8	>15	1.7	<1.5
ULTRA4100400K	10	40	±0.9	±8	>15	1.7	<1.5
ULTRA4060200	6	20	±0.6	±18	>17	1.6	<1.2
ULTRA4010180	1	18	±0.4	±8	>15	1.6	<2.5
ULTRA4020180	2	18	±0.45	±10	>17	1.7	<1.7
ULTRA4010124	1	12.4	±0.4	±7	>19	1.5	<2.0
ULTRA4040124	4	12.4	±0.3	±4	>19	1.4	<0.6
ULTRA4020080	2	8	±0.3	±6	>19	1.4	<1.0
ULTRA4005070	0.5	7	±0.6	±10	>18	1.3	<2.7
ULTRA4005040	0.5	4	±0.7	±12	>18	1.33	<1.8

ULTRA+ 2-WAY POWER DIVIDERS

KRYTAR ULTRA+ products offer even higher performance and tighter specifications.

FREQUENCY RANGE (GHz)	MODEL	MAXIMUM VSWR		INSERTION LOSS (< dB)	ISOLATION (> dB)	AMPLITUDE TRACKING (± dB)	PHASE TRACKING (± Degrees)
		IN	OUT				
2 TO 18	ULTRA6020180	1.4		1.1	19.5	0.15	3
1 TO 18	ULTRA6010180	1.4		1.15	19.5	0.2	3
0.5 TO 18	ULTRA6005180	1.4		1.45	20	0.2	3
2 TO 26.5	ULTRA6020265	1.40 (2 TO 18 GHz)		1.1 (2 TO 18 GHz)	19.5 (2 TO 18 GHz)	0.15 (2 TO 18 GHz)	3 (2 TO 18 GHz)
		1.57 (18 TO 26.5 GHz)		1.40 (18 TO 26.5 GHz)	18.5 (18 TO 26.5 GHz)	0.30 (18 TO 26.5 GHz)	5 (18 TO 26.5 GHz)
1 TO 26.5	ULTRA6010265	1.40 (1 TO 18 GHz)		1.15 (1 TO 18 GHz)	19.5 (1 TO 18 GHz)	0.20 (1 TO 18 GHz)	3 (1 TO 18 GHz)
		1.45 (18 TO 26.5 GHz)		1.60 (18 TO 26.5 GHz)	21.2 (18 TO 26.5 GHz)	0.30 (18 TO 26.5 GHz)	5 (18 TO 26.5 GHz)
0.5 TO 26.5	ULTRA6005265	1.40 (0.5 TO 18 GHz)		1.45 (0.5 TO 18 GHz)	20 (1 TO 18 GHz)	0.20 (0.5 TO 18 GHz)	3 (0.5 TO 18 GHz)
		1.45 (18 TO 26.5 GHz)		1.90 (18 TO 26.5 GHz)	19.5 (18 TO 26.5 GHz)	0.30 (18 TO 26.5 GHz)	5 (18 TO 26.5 GHz)
1 TO 40	ULTRA6010400	1.65 (1-20 GHz)	1.85 (20-40 GHz)	2.5	14	±0.25	5 (1-20 GHz)
		1.5 (20-40 GHz)	1.7 (20-40 GHz)				10 (20-40 GHz)

ULTRA+ 4-WAY POWER DIVIDERS



FREQUENCY RANGE (GHz)	MODEL #	MAXIMUM VSWR		INSERTION LOSS (< dB)	ISOLATION (> dB)	AMPLITUDE TRACKING (± dB)	PHASE TRACKING (± DEGREES)
		IN	OUT				
2 TO 18	ULTRA7020180	1.68	1.5	2	18	0.5	8
1 TO 18	ULTRA7010180	1.68	1.45	3	18	0.5	8
0.5 TO 18	ULTRA7005180	1.68	1.5	4	18	0.7	8
2 TO 26.5	ULTRA7020265	1.72	1.68	2.3	18	0.5	12
1 TO 26.5	ULTRA7010265	1.72	1.68	3.3	18	0.5	12
0.5 TO 26.5	ULTRA7005265	1.72	1.6	4.3	18	0.8	12
3 TO 40 GHz	ULTRA7030400K	1.9 (3-32 GHz)	1.7 (3-32 GHz)	3.4	13	0.35	10
		2.5 (32-40 GHz)	2.0 (32-40 GHz)				

ZERO BIAS SCHOTTKY DETECTORS

Frequency Range	Model	Frequency Response	Maximum VSWR	Input Connector	Output Connector Options
10 MHz - 18.5 GHz	109	± 0.3 dB to 12.4 GHz ± 0.6 dB to 18.5 GHz	1.15 to 4 GHz 1.30 to 15 GHz 1.40 to 18.5 GHz	N Male	(A) SMA Female or (B) BNC Female or (S) SMC Jack
10 MHz - 20 GHz	201	± 0.5 dB	1.35	3.5 mm Male	
10 MHz - 26.5 GHz	202	± 0.5 dB to 20 GHz ± 0.8 dB to 26.5 GHz	1.35 to 20 GHz 1.50 to 26.5 Ghz	3.5 mm Male	
10 MHz - 40 GHz	203 or 203K	± 0.5 dB to 20 GHz ± 0.8 dB to 26.5 GHz ± 1.5 dB to 40 GHz	1.35 to 20 GHz 1.50 to 26.5 GHz 2.00 to 40 GHz	2.4 mm Male or 2.92 mm Male	
100 MHz - 18.5 GHz	209	± 0.3 dB to 12.4 GHz ± 0.6 dB to 18.5 GHz	1.15 to 4 GHz 1.30 to 15 GHz 1.40 to 18.5 GHz	N Male	
100 MHz - 20 GHz	301	± 0.5 dB	1.35	3.5 mm Male	
100 MHz - 26.5 GHz	302	± 0.5 dB to 20 GHz ± 0.8 dB to 26.5 GHz	1.35 to 20 GHz 1.50 to 26.5 Ghz	3.5 mm Male	
100 MHz - 40 GHz	303 or 303K	± 0.5 dB to 20 GHz ± 0.8 dB to 26.5 GHz ± 1.5 dB to 40 GHz	1.35 to 20 GHz 1.50 to 26.5 GHz 2.00 to 40 GHz	2.4 mm Male or 2.92 mm Male	

PLANAR DOPED BARRIER DETECTORS

Frequency Range	Model	Frequency Response	Maximum VSWR	Input Connector	Output Connector Options
10 MHz - 18.5 GHz	110	± 0.3 dB to 12.4 GHz ± 0.6 dB to 18.5 GHz	1.15 to 4 GHz 1.30 to 15 GHz 1.40 to 18.5 GHz	N Male	(A) SMA Female or (B) BNC Female or (S) SMC Jack
10 MHz - 20 GHz	601	± 0.3 dB	1.30	3.5 mm Male	
10 MHz - 26.5 GHz	602	± 0.3 dB to 20 GHz ± 0.6 dB to 26.5 GHz	1.30 to 20 GHz 1.40 to 26.5 Ghz	3.5 mm Male	
10 MHz - 40 GHz	603 or 603K	± 0.3 dB to 20 GHz ± 0.6 dB to 26.5 GHz ± 1.0 dB to 40 GHz	1.30 to 20 GHz 1.40 to 26.5 GHz 1.70 to 40 GHz	2.4 mm Male or 2.92 mm Male	
100 MHz - 18.5 GHz	210	± 0.3 dB to 12.4 GHz ± 0.6 dB to 18.5 GHz	1.15 to 4 GHz 1.30 to 15 GHz 1.40 to 18.5 GHz	N Male	
100 MHz - 20 GHz	701	± 0.3 dB	1.30	3.5 mm Male	
100 MHz - 26.5 GHz	702	± 0.3 dB to 20 GHz ± 0.6 dB to 26.5 GHz	1.30 to 20 GHz 1.40 to 26.5 Ghz	3.5 mm Male	
100 MHz - 40 GHz	703 or 703K	± 0.3 dB to 20 GHz ± 0.6 dB to 26.5 GHz ± 1.0 dB to 40 GHz	1.30 to 20 GHz 1.40 to 26.5 GHz 1.70 to 40 GHz	2.4 mm Male or 2.92 mm Male	

COAXIAL PLANAR TUNNEL DIODE DETECTORS

Model	Frequency (GHz)	Voltage Sensitivity µV/µW Typical	Tss (-dBm) Typ	VSWR (Typical)	Flatness (±dB Max)	Video Capactance (pF)
KDT0120	0.1 - 2.0	0.80	51	2.00	0.75	470
KDT0140	0.1 - 4.0	0.80	51	2.20	0.75	470
KDT0112	0.1 - 12.4	0.80	50	2.50	1.00	470
KDT8018	8.0 - 18.0	0.70	47	3.00	0.75	10
KDT6018	6.0 - 18.0	0.70	47	3.00	0.75	10
KDT2018	2.0 - 18.0	0.50	47	3.50	1.00	20
KDT1018	1.0 - 18.0	0.40	47	3.50	1.00	50
KDT0518	0.5 - 18.5	0.50	50	3.50	1.00	100

COAXIAL THRESHOLD DETECTORS

Model	Frequency (GHz)	VSWR (Typical)	Threshold Variation (±dB, Max.)
KTH0120	0.1 - 2.0	2.00	0.75
KTH0140	0.1 - 4.0	2.60	0.75
KTH0112	0.1 - 12.4	2.70	1.00
KTH8018	8.0 - 18.0	3.00	0.75
KTH6018	6.0 -18.0	3.00	0.75
KTH2018	2.0 - 18.0	3.00	1.00
KTH0518	0.5 - 18.5	3.50	1.00

COAXIAL PIN - PIN DIODE LIMITERS

Model	Frequency (GHz)	Insertion Loss (dB)	VSWR (Typical)	Minimum Leakage Power (dBm)	
				Peak	CW
KPL0520	0.5 - 2.0	0.50	1.40	+23.0	+20.0
KPL0140	0.5 - 4.0	0.60	1.40	+23.0	+20.0
KPL8018	8.0 - 18.0	2.20	2.00	+20.0	+19.0
KPL6018	6.0 - 18.0	2.20	2.00	+20.0	+19.0
KPL2018	2.0 - 18.0	2.50	2.20	+23.0	+19.0

COAXIAL PIN - SCHOTTKY DIODE LIMITERS

Model	Frequency (GHz)	Insertion Loss (dB)	VSWR (Typical)	Minimum Leakage Power (dBm)	
				Peak	CW
KSL0520	0.5 - 2.0	0.60	1.50	+20.0	+16.0
KSL0140	0.5 - 4.0	0.80	1.50	+20.0	+16.0
KSL8018	8.0 - 18.0	2.50	2.20	+19.0	+15.0
KSL6018	6.0 - 18.0	2.50	2.20	+19.0	+15.0
KSL2018	2.0 - 18.0	2.50	2.20	+20.0	+16.0



COAXIAL ADAPTORS

Frequency (GHz)	Adapter Type	Type Connector	Connector Configuration	VSWR (Max)	Model Number
DC-27 GHZ	In Series	SMA	Female to Male	1.10 to 18 GHz 1.15 18 to 27 GHz	1030
DC-27 GHZ	In Series	SMA	Male to Male	1.10 DC to 18 GHz 1.15 18 to 27 GHz	1031
DC-27 GHZ	In Series	SMA	Female to Female	1.10 DC to 18 GHz 1.15 18 to 27 GHz	1032
DC-40 GHZ	In Series	2.92mm	Female to Male	1.10 DC to 27 GHz 1.15 27.0 to 40 GHz	2030
DC-40 GHZ	In Series	2.92mm	Male to Male	1.10 DC to 27.0 GHz 1.15 27.0 to 40 GHz	2031
DC-40 GHZ	In Series	2.92mm	Female to Female	1.10 DC to 27 GHz 1.15 27 to 40GHz	2032
DC-50 GHZ	In Series	2.4mm	Female to Male	1.10 DC to 27 GHz 1.15 27 to 40 GHz 1.20 40 to 50 GHz	3030
DC-50 GHZ	In Series	2.4mm	Male to Male	1.10 DC to 27 GHz 1.15 27 to 40 GHz 1.20 40 to 50 GHz	3031
DC-50 GHZ	In Series	2.4mm	Female to Female	1.10 DC to 27 GHz 1.15 27 to 40 GHz 1.20 40 to 50 GHz	3032
DC-67 GHZ	In Series	1.85mm	Female to Male	1.10 DC to 18 GHz 1.15 18-40 GHz 1.18 40-50 GHz 1.25 50-67 GHz	4030
DC-67 GHZ	In Series	1.85mm	Male to Male	1.10 DC to 18 GHz 1.15 18-40 GHz 1.18 40-50 GHz 1.25 50-67 GHz	4031
DC-67 GHZ	In Series	1.85mm	Female to Female	1.10 DC to 18 GHz 1.15 18-40 GHz 1.18 40-50 GHz 1.25 50-67 GHz	4032
DC-40 GHZ	Between Series	2.92mm to 2.4mm	Female to Female	1.10 DC to 18 GHz 1.15 18 to 40 GHz	5010
DC-40 GHZ	Between Series	2.92mm to 2.4mm	Female to Male	1.10 DC to 18 GHz 1.15 18 to 40 GHz	5020
DC-40 GHZ	Between Series	2.92mm to 2.4mm	Male to Female	1.10 DC to 18 GHz 1.15 18 to 40 GHz	5030
DC-40 GHZ	Between Series	2.92mm to 2.4mm	Male to Male	1.10 DC to 18 GHz 1.15 18 to 40 GHz	5040

BUTLER MATRIX

Model #	Frequency (Min) GHz	Frequency (Max) GHz	VSWR (Max)	Insertion Loss (dB)	Phase Imbalance (Degrees)	Amplitude Imbalance (dB)	Isolation (dB) Min
KBM9100400	10	40	2	< 12	±15	±1.2	12
KBM9180400	18	40	2	< 12	±15	±1.3	12
KBM9300400	30	40	2	< 12	±15	±1.3	12
KBM9240300	24	30	1.9	< 11	±15	±1.3	12
KBM9014265	1.4	26.5	2	< 13.5	±17	1.6	10
KBM9060265	6	26.5	2	< 13.5	±16	1.6	10
KBM9010180	1	18	1.7	< 12	±18	±1	14
KBM9020080	2	8	1.5	< 8.5	±10	±0.8	14
KBM90240725	2.4	7.25	1.5	< 7.9	±8.9	±0.8	14
KBM9005070	0.5	7	1.5	< 11	±12	±1.0	14
KBM9020070	2	7	1.5	< 8	±10	±0.8	14
KBM9020060	2	6	1.4	< 7.5	±8	±1.0	14
KBM9007022	0.7	2.2	1.2	< 8	±3	±0.4	16
KBM9005010	0.5	1	1.3	< 8	±3	±0.4	16

BUTLER MATRIX- PHASE SHIFTED

Model #	Frequency (Min) GHz	Frequency (Max) GHz	VSWR (Max)	Insertion Loss (dB)	Phase Imbalance Degrees	Amplitude Imbalance (dB)	Isolation (dB) Min
KBMPS100400	10	40	1.9	<12.5	±15	±2.2	15
KBMPS180400	18	40	1.9	<12.5	±15	±2.2	15
KBMPS300400	30	40	1.9	<12.5	±16	±2.2	15
KBMPS240300	24	30	1.7	<12	±15	±2.0	15
KBMPS014265	1.4	26.5	2	<13	±10	±2.0	11
KBMPS060265	6	26.5	2	<13	±10	±2.0	11
KBMPS020080	2	8	1.5	<8.5	±10	±0.8	14
KBMPS0240725	2.4	7.25	1.4	<8.0	±15	±0.5	17.5
KBMPS005070	0.5	7	1.5	<11	±12	±1.0	14

MONOPULSE COMPARATOR

MODEL #	FREQUENCY (min) GHz	FREQUENCY (max) GHz	VSWR (max)	INSERTION LOSS (dB min)	PHASE IMBALANCE (DEG Max)	AMPLITUDE IMBALANCE (dB Min)
RFM100400	10	40	2.2	12.3	±26	±2.0
RFM180400	18	40	2.2	12.3	±26	±2.0
RFM010265	1	26.5	2.2	14.4	±36	±1.5
RFM060200	6	20	2.0	10.3	±21	±1.5
RFM010180	1	18	1.9	12.7	±32	±1.0
RFM020180	2	18	2.0	11.8	±34	±1.5
RFM010124	1	12.4	2.2	12.3	±25	±1.0
RFM020080	2	8	1.8	9.0	±20	±0.6
RFM005070	0.5	7	1.5	13.0	±26	±1.2
RFM1005040	0.5	4	1.7	11.5	±26	±1.2

BIAS TEES

MODEL #	FREQUENCY MIN. (MHz)	FREQUENCY MAX. (MHz)	INSERTION LOSS (dB)	VSWR (max)	ISOLATION (dB)	DC VOLTAGE (VOLTS MAX)
KBT100400	10-40	40	3.6	1.9	11	60
KBT014320	1.4-32	32	6.0	1.9	11	50
KBT014265	1.4-26.5	26.5	6.0	1.8	10	50
KBT100265	10-26.5	26.5	1.9	1.5	13	60
KBT060200	6-20	20	1.8	1.85	11	50
KBT010180	1-18	18	3.9	1.65	11	50
KBT020180	2-18	18	2.7	1.5	16	50
KBT010124	1-12.4	12.4	3.0	1.55	18	50
KBT020080	2-8	8	1.4	1.5	16	35
KBT005070	0.5-7	7	2.7	1.5	14	50
KBT005040	0.5-4	4	2.7	1.5	13	50

Space Qualified Directional Couplers

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Directivity	Inser-tion Loss (dB)
2 - 8.6	102008616-SQ	16 ± 1.0	± 0.25	20	0.5
1 - 40	101004010-SQ	10 ± 0.8	± 1.2	20	1
	101004010K-SQ				

Space Qualified 2–Way Power Dividers

Frequency Range (GHz)	Model	Band Segments	Maximum VSWR		Insertion Loss (dB)	Isolation (dB)	Amplitude Tracking (dB)	Phase Tracking (Degrees)
			In	Out				
0.5 - 26.5	6005265-SQ	0.5 - 18	1.45		1.90	19	0.3	10
		18 - 26.5	1.60				0.5	

Space Qualified 3 dB 180° Hybrid Couplers

Frequency Range (GHz)	Model	Amplitude Imbalance (db)	Phase Imbalance (Degrees)	Isolation (dB Min)	Maximum VSWR	Insertion Loss (dB Max)
1 - 26.5	4010265-SQ	±1.00 to 20 GHz ±1.50 to 26.5 GHz	±16	15	1.80 to 20 GHz 1.95 to 26.5 GHz	3.0 to 20 GHz 3.6 to 26.5 GHz

Space Qualified Coaxial Termination

Frequency Range	Model	Maximum VSWR	Connector	Dimensions
DC - 20 GHz	T1M-SQ	1.05	3.5 mm Male	0.80” x 0.36” dia.
DC - 26.5 GHz	T2M-SQ	1.09	3.5 mm Male	0.80” x 0.36” dia.
DC - 40 GHz	T3M-SQ	1.20	2.4 mm Male	0.84” x 0.36” dia.

Thermal Vacuum Qualified Directional Couplers

Frequency Range (GHz)	Model	Nominal Coupling (dB)	Frequency Sensitivity (dB)	Directivity	Insertion Loss (dB)
2 - 8.6	102008616-TV	16 ± 1.0	± 0.25	20	0.5
1 - 40	101004010-TV	10 ± 0.8	± 1.2	20	1
	101004010K-TV				

Thermal Vacuum Qualified 2–Way Power Dividers

Frequency Range (GHz)	Model	Band Segments	Maximum VSWR		Insertion Loss (dB)	Isolation (dB)	Amplitude Tracking (dB)	Phase Tracking (Degrees)
			In	Out				
0.5 - 26.5	6005265-TV	0.5 - 18	1.45		1.90	19	0.3	10
		18 - 26.5	1.60				0.5	

Thermal Vacuum Qualified 3 dB 180° Hybrid Couplers

Frequency Range (GHz)	Model	Amplitude Imbalance (db)	Phase Imbalance (Degrees)	Isolation (dB Min)	Maximum VSWR	Insertion Loss (dB Max)
1 - 26.5	4010265-TV	±1.00 to 20 GHz ±1.50 to 26.5 GHz	±16	15	1.80 to 20 GHz 1.95 to 26.5 GHz	3.0 to 20 GHz 3.6 to 26.5 GHz

Thermal Vacuum Qualified Coaxial Termination

Frequency Range	Model	Maximum VSWR	Connector	Dimensions
DC - 20 GHz	T1M-TV	1.05	3.5 mm Male	0.80” x 0.36” dia.
DC - 26.5 GHz	T2M-TV	1.09	3.5 mm Male	0.80” x 0.36” dia.
DC - 40 GHz	T3M-TV	1.20	2.4 mm Male	0.84” x 0.36” dia.

QUANTUM/CRYOGENICS

DIRECTIONAL COUPLERS MODEL NUMBER	FREQUENCY RANGE	NOMINAL COUPLING (dB)	FREQUENCY SENSITIVITY (dB)	DIRECTIVITY (dB min)	VSWR	INSERTION LOSS
1040124010-Q-1006	4-12.4 GHz	10±0.5	±0.3	>15	1.35	>0.9
1040124020-Q-1006	4-12.4 GHz	20±1.0	±0.3	>15	1.35	>0.5
1040124030-Q-1006	4-12.4 GHz	30±1.0	±0.3	>15	1.35	>0.5
1020124010-Q-1006	2-12.4 GHz	10±0.5	±0.3	>16	1.35	>1.1
1020124020-Q-1006	2-12.4 GHz	20±1.0	±0.30	>16	1.35	>0.8
1020124030-Q-1006	2-12.4 GHz	30±1.0	±0.5	>12	1.5	>0.8
1010124010-Q-1006	1-12.4 GHz	10±0.5	±0.3	>15	1.35	>1.1

2–WAY POWER DIVIDERS	FREQUENCY RANGE	VSWR	INSERTION LOSS (dB)	ISOLATION (dB)	AMPLITUDE IMBALANCE (dB)	PHASE IMBALANCE (Degrees)
MODEL NUMBER						
6020180-Q-1006	2-18 GHz	1.45	<1.1	>19	±0.3	±6

90° HYBRID	FREQUENCY RANGE	VSWR	INSERTION LOSS (dB)	ISOLATION (dB)	AMPLITUDE IMBALANCE (dB)	PHASE IMBALANCE (Degrees)
MODEL NUMBER						
3010124-Q-1006	1-12.4 GHz	1.30	<1.4	>20	±0.4	±7

180° HYBRID	FREQUENCY RANGE	VSWR	INSERTION LOSS (dB)	ISOLATION (dB)	AMPLITUDE IMBALANCE (dB)	PHASE IMBALANCE (Degrees)
MODEL NUMBER						
4010124-Q-1006	1-12.4 GHz	1.6	<2.1	>17	±0.4	±10

50 OHM COAX TERMINATION	FREQUENCY RANGE	VSWR
MODEL NUMBER		
T1MA-Q-1006	DC-12.4 GHz	1.08

END LAUNCH TERMINATIONS

FREQUENCY RANGE	DC - 27 GHz
MAXIMUM VSWR	1.2:1, DC-18 GHz 1.4:1, 18-27 GHz
IMPEDANCE	50 ±1 Ohm
POWER RATING (input)	0.5 Watt
OPERATING TEMPERATURE	-65°C to +125° C

TABLE 1

MODEL	DIAMETER (INCHES)	Y(MAX) (INCHES)	SUBSTRATE THICKNESS (INCHES)
KAT27010A-4x5	0.01	0.60	.005 - 0.1
KAT27010B-4x5	0.01	0.69	0.1 - 0.2
KAT27010C-4x5	0.01	0.77	0.2 - 0.3
KAT27007A-4x5	.007	0.60	.005 - 0.1
KAT27007B-4x5	.007	0.69	0.1 - 0.2
KAT27007C-4x5	.007	0.77	0.2 - 0.3
KAT27005A-4x5	.005	.60	.005 - 0.1
KAT27005B-4x5	.005	0.69	0.1 - 0.2
KAT27005C-4x5	.005	0.77	0.1 - 0.3

FREQUENCY RANGE	DC - 40 GHz
MAXIMUM VSWR	1.4:1
IMPEDANCE	50 ±1 Ohm
POWER RATING (input)	0.5 Watt
OPERATING TEMPERATURE	-65°C to +125° C

TABLE 1

MODEL	DIAMETER (INCHES)	Y(MAX) (INCHES)	SUBSTRATE THICKNESS (INCHES)
KAT4010A-4x5	0.01	0.60	.005 - 0.1
KAT4010B-4x5	0.01	0.69	0.1 - 0.2
KAT4010C-4x5	0.01	0.77	0.2 - 0.3
KAT4007A-4x5	.007	0.60	.005 - 0.1
KAT4007B-4x5	.007	0.69	0.1 - 0.2
KAT4007C-4x5	.007	0.77	0.2 - 0.3
KAT4005A-4x5	.005	.60	.005 - 0.1
KAT4005B-4x5	.005	0.69	0.1 - 0.2
KAT4005C-4x5	.005	0.77	0.1 - 0.3

FREQUENCY RANGE	DC - 50 GHz
MAXIMUM VSWR	1.5:1
IMPEDANCE	50 ±1 Ohm
POWER RATING (input)	0.5 Watt
OPERATING TEMPERATURE	-65°C to +125° C

TABLE 1

MODEL	DIAMETER (INCHES)	Y(MAX) (INCHES)	SUBSTRATE THICKNESS (INCHES)
KAT5010A-4x5	0.01	0.60	.005 - 0.1
KAT5010B-4x5	0.01	0.69	0.1 - 0.2
KAT5010C-4x5	0.01	0.77	0.2 - 0.3
KAT5007A-4x5	.007	0.60	.005 - 0.1
KAT5007B-4x5	.007	0.69	0.1 - 0.2
KAT5007C-4x5	.007	0.77	0.2 - 0.3
KAT5005A-4x5	.005	.60	.005 - 0.1
KAT5005B-4x5	.005	0.69	0.1 - 0.2
KAT5005C-4x5	.005	0.77	0.1 - 0.3

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