

ROHS Compliant

RADITEK INC.

RI-SS-de/dd isolator
RC-SS-dd circulator

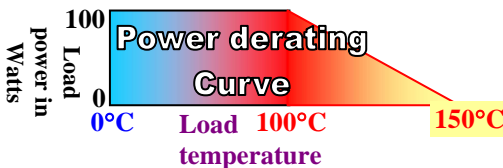
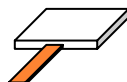


de isolator + Attenuator

Samarium side (SS)
Magnets

Attenuator load option
20dB or 30 dB 100W

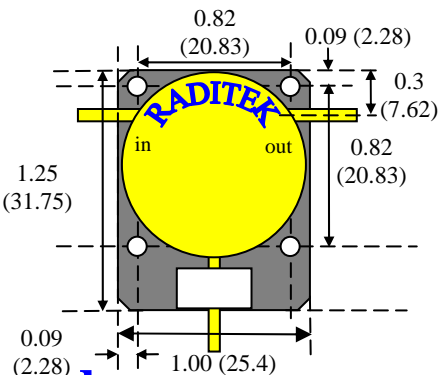
Optional Monitor
tabs are ~ 0.150"
long typically.



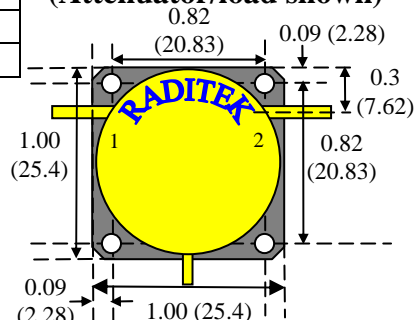
Circuit Tab height: 0.16" (4.06mm).
Overall height: 0.26 (6.6mm) (incl. magnet).
Flange Thickness: 0.150" (3.81mm).
Mounting holes Ø: 0.116" (2.95mm)



dd circulator



de Isolator 100W/110W
(Attenuator/load shown)



dd Circulator or 10 / 20W isolator

660MHz to 2.17GHz

Standard Specification examples:

Frequ. MHz F1-F2	Insertion Loss dB Max.	Isolation Minimum dB	Return Loss dB	VSWR All ports
820-850	0.3	22	21	1.19:1
860-900	0.25	22	21	1.19:1
869-894	0.25	22	21	1.19:1
915-960	0.25	22	21	1.19:1
935-960	0.25	22	22	1.17:1
1930--1990	0.29	22	21	1.19:1

Circuit tab details:

Unit	Length	Width dd/de	Thickness
Inch	0.09	0.05	0.005
mm	2.29	1.4	0.13

Size ID:	de	dd	dd
	RI	RI	RC
	Iso.	Iso.	Circ.
P rev	110/100W	10W/30W	200W

Direction of RF:

R	default	→
L		←

Order as: RI-SS-F1-F2-de-110WR (example)

General specifications:

Max. Fwd power:	250 Watts	Average
Max. Rev power(avg): (Load rating)	110 Watts load 100W attenuator 10 / 30W (option)	Assumes infinite heat sink Load temp to be kept < 90°C
Peak Power handling	>1KW	
Passband ripple	0.05 dB	Pk-Pk
Operating temp.	-20°C to 85°C	-54°C to 110°C storage

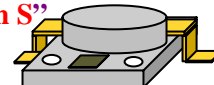
Specification Options:

Attenuator type	-A20; -A30	20 dB or 30 dB 100W Rating
Phase Matching	-PM	+/- 5 degrees of gold standard
Surface mount	-S	Tab is level with base, add 0.10dB to IL
Low Loss	-M	See specs for availability
Special	-Z	Tab ht. is 62 mils (1.58 mm)
Tab left or right, de model only	-TABL(R)	Monitor tab (L or R of Load
Low Intermodulation.	-H	See the -U models for very best IMD performance.

Units: inch (mm)

Tolerance	.XX	.XXX
Inch	±0.02	±0.010
mm	±0.5	±0.25

Circuit Tabs can be bent flush with base for surface mounting "option S"



Standard dd/de strain relief.

20 mil ±10 mil radius (0.5±0.25mm)

Machined surface: $\sqrt[63]{}$
Housings are made from Steel & Aluminum, Magnetically shielded, Nickel or Silver plated.

RI, RC-SS-d-models

Specifications may be subject to change

02/26/07

WORLD HQ: 1702H Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.

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WEB: www.raditek.com, E-mail: sales@raditek.com

Additional Specs for d models

Frequ. Hz	BW %	Insertion Loss dB Max.	Isolation Minimum dB	Return Loss dB	VSWR All ports	Full band full temp range, unless specified	
660-710M		0.7	20	19	1.25		50M Bandwidth
665-735M		0.7	20	19	1.25		
684-746M		0.6	23	19	1.25		62M Bandwidth
695-705M		0.5	23	20	1.22		
710-745M		0.35	21	19	1.25		
740-746M		0.25	22	21	1.19		
747-767M		0.25	22	21	1.19		
755-805M		0.4	22	21	1.19		
780-830M		0.4	22	21	1.19		
780-862M		0.45	21	21	1.19		0.4dB typical
790-810M		0.25	22	22	1.17		
790-880M		0.45	21	21	1.19		
794-825M		0.28	22	22			
800-850M		0.4	21.5	21.5			Conf d 2-3-05
800-900M		0.4	21	21	1.19		
800-1000M		0.45	15	15			
806-870M		0.3	21	21	1.19		
810-915M	12.96	0.45	18	18	1.30	-20 to 85C	0.3/20/1.20 @ RT
811-821M		0.28	25	25			
815-925M		0.4	20	20	1.22		
820-840M		0.25	22	23	1.15	0-50C	
820-850M-con		0.25	22	23	1.15	0-65C	Tabs 0.07Lx.025W
824-849M		0.3	23	23	1.15		3-30-05 with Y13-0025
825-835M		0.25	22	21	1.19		
825-880M	65M	0.3	21	21	1.19		
830-872M		0.3	20	18	1.30		
840-900M		0.3	22	22	1.17		
846-876M		0.25	23	20.8	1.20		
850-866M		0.25	24	24			
850-870M		0.25	23	22			
850-880M		0.25	22	21	1.19		
850-900M		0.30	20	21	1.19		
850-920M		0.4	19	19	1.25		
850-940M		0.5	18	18	1.30		
851-866M		0.25	22	22	1.17		
851-894M		0.25	22	22	1.17		
856-866M		0.2	24	24			
859-904M		0.25	23	20.8	1.20		
860-904M		0.30	22	21	1.19		

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860-872M		0.25	23	23	1.15		
860-915M		0.30	22	21	1.19		
860-930M	70M	0.3	22	22	1.17	RFID	
860-950M	90M	0.35	20	20	1.22		
860-960M	100M	0.4	19	19	1.25		
864-866M		0.25	30	25	1.12	RFID	tbc 2-7-05
865-900M		0.35	22	20	1.22	0 to 85C	
867-869M		0.25	30	25	1.12		
869-894M	91M	0.25	22	21	1.19		-M (opt) 0.20dB IL Typical
869-1000M	136 M	0.45	18	18	1.30		
869-960M	91M	0.30	20	20	1.22		
870-880M		0.25	22	22	1.17		
876-960M		0.30	20	20	1.22		
880-894M		0.25	22	22	1.17		
880-915M		0.3	21	21	1.19		
880-920M		0.25	22	22	1.17		t
880-960M		0.3	21	21	1.19		-s (0.4IL) ok 5-10-04
882-892M	10M	0.25	22	22	1.17		
885-915M	30M	0.25	23	21	1.19		
885-920M		0.25	22	21	1.19		
890-960M		0.30	22	21	1.19		
895-905M	10M	0.25	22	22	1.17		
900-980M	80M	0.4	20	20	1.22	RFID	
900-960M		0.40	20	21	1.19		
900-980M		0.40	20	21	1.19	-15 to +90C	
900-925M		0.25	22	21	1.19		
902-928M		0.3	22	22	1.17		
905-925M		0.3	22	22	1.17		* 0.35/21/21 for SMT Versions
905-935M		0.3	21	21	1.19		* 0.40/20/20 for SMT Versions
910-920M	4	0.22	23	21	1.19		
910-970M	4	0.3	21	21	1.19		
911-946M		0.35	21	21	1.19	full	
914-916M		0.25	30	25	1.12	RFID	tbc 2-7-05
915-960M		0.3	21	21	1.19		
920-960M	4	0.3	21	21	1.19		
920-965M		0.3	21	21	1.19		
921-960M	4	0.3	22	22	1.17		* 0.35/21/21 for SMT Versions
925-960M		0.3	22	22	1.17		
925-965M		0.3	22	22	1.17		
928-929M		0.25	24	24	1.19		
935-940M		0.23	22	22	1.17		

RI, RC-SS-d-models

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935-960M	25M	0.25	22	22	1.17		(-M 0.2dB IL (0.15dB typical) 4/22/04)
947-960M		0.25	22	22	1.17		
950-953M		0.25	30	25	1.12	RFID	ok 2-7-05
950-1100M		0.6	18	18	1.30		
950-1115M		0.5	18	15	1.4		
950-1230M		0.6	16	14	1.5		0 to 50C To meet cust request (e)
950-1250M	300M	0.6	16	14	1.5		-30 to 85C, confirmed 9-30-05
950-1280M	330M	0.8	16	16	1.38		
950-1300M	350M	0.9	14	14	1.5		
950-1450M	500M	1.2	12	12	1.65		0-50C
960-1206M	31.6	0.7	16	16	1.38		
960-1215M		0.6	16	16	1.38	At -20 to 85C	
962-1215M		0.6	16	16	1.38	At -20 to 85C	
960-1250M		0.6	16	14	1.35		
978.5-1081.5M		0.3	21	21	1.19		
978-1082M		0.3	21	21	1.19		
978-1092M		0.5	20	19	1.25		
1000-1100M		0.5	20	19	1.25		
1000-1200M		0.38	18	18	1.30		
1020-1250M		0.6	16	16	1.38		
1000-1600M*		0.5	20	19	1.25	(S) 12-3-02	* 200M BW
1010-1119M		0.5	20	19	1.25		
1020-1040M		0.3	20	21	1.19		
1020-1110M		0.5	18	16	1.40	-40 to 85C	
1024-1036M		0.3	20	21	1.19		
1034-1145M		0.5	20	19	1.25		
1030-1090M	12.96	0.3	20	21	1.19	-20 to 85C	
1055-1065M		0.5	20	19	1.25	-55 to +95	
1080-1100M		0.5	20	19	1.25		
1150-1300M		0.4	19	19	1.25		
1175-1225M		0.30	21	21	1.19		
1140-1260M		0.5	22	19	1.25	0 to 40°C	
1180-1420M		0.5	18	18	1.30		
1200-1250M		0.3	21	21	1.19		
1200-1400M		0.4	20	20	1.20		-10 to +75°C
1200-1400M		0.5	20	20	1.20		
1200-1400M		0.5	17	19	1.25		-AMS
1200-1600M		0.6	18	18	1.30	To be confirmed	0.8/10/10 customer spec (3-16-05)
1240-1300M		0.30	20	20	1.22		
1250-1350M		0.30	20	20	1.22		
1250-1400M		0.4	20	20	1.20		

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1210-1620M		0.6	18	18	1.5	To be confirmed	
1300-1400M		0.35	20	20	1.22		
1300-1500M		0.4	20	19	1.25		0.25/20/19 on test 1/16/06
1350-1400M		0.25	20	20	1.22		
1350-1450M		0.35	20	19	1.25	(-M is 0.32)	Special (0.25dB @ Room Temp)
1350-1525M		0.35	20	19	1.25		
1350-1550M		0.4	20	19	1.25		
1393-1433M		0.35	20	19	1.25		
1400-1500M		0.35	21	20	1.21		
1400-1600M		0.5	20	19	1.25	-55 to 85°C	.4 / 20 / 1.25 @ -40-85C
1420-1550M		0.35	21	21	1.19		
1420-1560M		0.35	21	21	1.19		
1420-1620M		0.40	19	20	1.22		
1450-1500M		0.35	21	21	1.19		
1425-1525M		0.3	21	21	1.19		
1429-1487M		0.25	22	21	1.19		
1450-1550M		0.3	21	21	1.19		
1500-1700M		0.4	19	20	1.22		C – tbc 010906
1500-2000M		0.8	14	14	1.50	-20 to 80C	
1518-1675M		0.45	21	21	1.19		
1522-1661M		0.4	22	22	1.17		
1525-1661M		0.4	22	22	1.17		0.55/21/22 (s) 9-17-06 mt
1550-1600M	50M	0.4	22	22	1.17		
1550-1610M	60M	0.4	22	22	1.17		
1550-1650M	100M	0.5	19	20	1.22		
1550-1660M		0.5	19	20	1.22		
1550-1750M		0.4	19	20	1.22		
1550-1750M		0.5	18	19		(s) 3/22/05	
1585-1770M	136M	0.4	18	18	1.30	5/05/05 (br)	
1600-1660M		0.3	22	21	1.19		0.3/25/1.19 @ room temp
1600-1750M		0.4	20	20	1.22		
1600-1800M		0.4	19	20	1.22	(S) 12-3-02	(Mi) 6-23-04
1626-1661M		0.3	23	18	1.30		
1650-1700M		0.3	22	21	1.19		0.3/25/1.19 @ room temp
1650-1850M		0.4	20	19	1.25		
1700-1820M		0.4	20	20	1.22		
1700-1900M		0.4	20	20	1.22		
1710-1730M		0.3	24	21	1.19		
1710-1880M		0.4	20	20	1.22		
1710-1855M		0.35	20	20	1.22		
1710-2170M							

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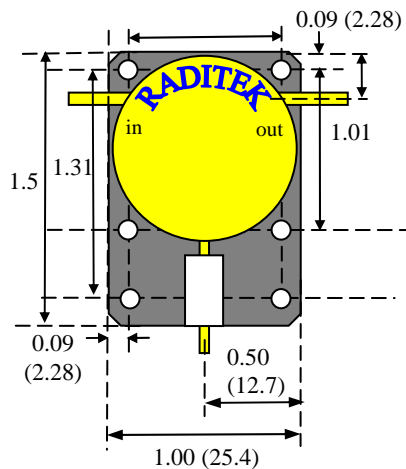
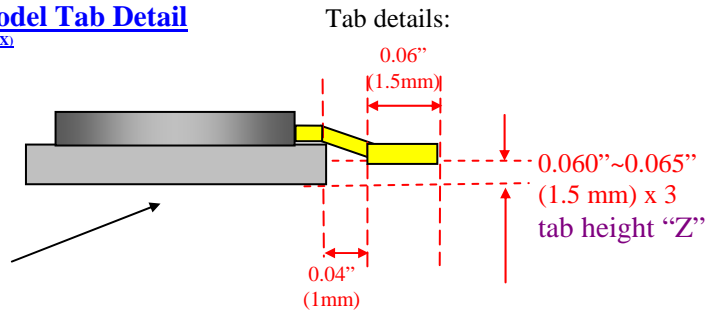
Frequ. Hz	BW %	Insertion Loss dB Max.	Isolation Minimum dB	Return Loss dB	VSWR All ports	Full band full temp range, unless specified	
1740-1860M		0.3	24	19	1.25		@ -54 to +95°C
1750-1850M		0.4	20	20	1.22		
1770-1830M		0.3	24	21	1.19		
1785-1805M		0.3	24	21	1.19		
1800-1885M		0.29	21	21	1.19		
1800-1900M		0.3	21	21	1.19		
1800-2000M		0.4	20	20	1.22		
1800-2170M		0.4	19	19	1.25		
1800-2200M		0.4	17	17	1.32		Verified 10-10-04 mt
1805-1825M		0.3	24	21	1.19		
1805-1880M	4.0	0.3	22	21	1.19		
1830-1880M		0.3	22	21	1.19		
1850-1910M	3.2	0.3	24	21	1.19		
1850-1880M		0.3	22	21	1.19		
1850-1990M		0.35	20	19	1.25		
1850-2050M		0.4	19	19	1.25		
1893-1920M		0.3	22	21	1.19		
1900-2300M		0.5	19.1	19.1	1.25		
1920-1980M		0.29	22	21	1.19		
1920-2170M		0.5	19.1	19.1	1.25		
1920-2000M		0.35	21	21	1.19		
1920-2200M		0.5	20	20	1.22		See D4 dated 2-3-03
1930-1990M	3.1	0.29	22	21	1.19		
2.07-2.21G	0.5	0.4	22	21	1.19		
2.09-2.10G	0.5	0.3	22	21	1.19		
2.10-2.17G	3.3	0.2	24	21	1.19	-M	loss typically <0.15dB (spec)
2.10-2.17G	3.3	0.29	22	21	1.19	Standard	
2.10-2.20G	3.3	0.3	23	21	1.19		
2.11-2.17G	3.3	0.2	24	21	1.19		

Additional Tab Options:

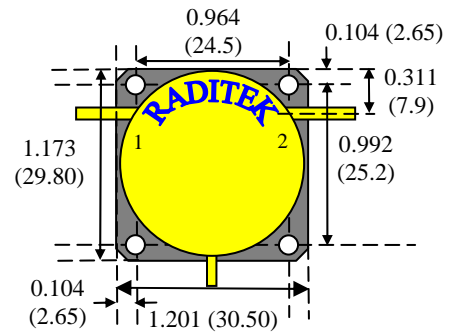
option	Tab above base +/-0.010"	Distance Tab vertical from unit +/-0.005"	length Flat soldering part of Tab /-0.005"	Overall tab protrusion from carrier (max)	Tab clearance above channel (Min)	Perpendicular
-S	0.00 (level)	0.040"	0.045"	0.1"		
-Z	0.060"(1.53mm)	0.040" (1.0mm)	0.06"	0.1"	0.06"	Slopes see page 3
-Y	0.035" (0.9mm)	0.040"	0.045"	0.1"		

leads can be bent + or - 10 mils without affecting performance in any way

-Z Model Tab Detail
(formerly -X)



df Isolator
(Attenuator/load shown)



dda Circulator