

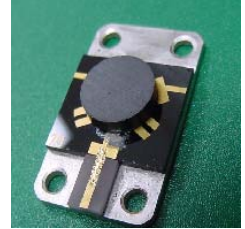
RDKF Isolators / RDKC Circulators

4 Hole models: Microstrip isolators and circulators (1.7 to 16.0 GHz)

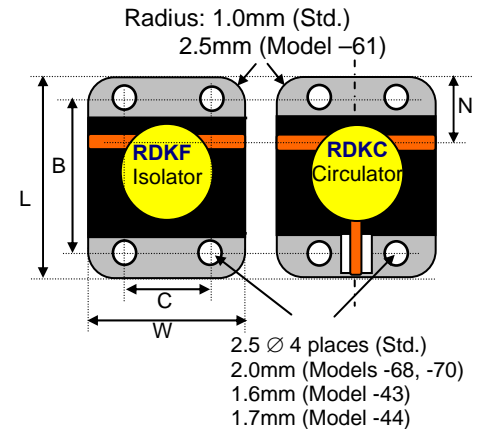
-recommend RADC MS51 series over 6GHz

The RDKF(C) series of isolators and circulators are designed to meet all of your Microstrip requirements. They can be optimized to your exact frequency needs. Standard dimensions include drop-in replacements for FDK and TDK (for example).

All thin film isolator circuits are gold on copper, suitable for soldering (very easy with regular solder, (silver solder preferred), or gold thermo-compression bonding



General specifications:							
Model foot print	Frequency (GHz)	% bw max	Fwd Power max	Available loads. Watts	Pad height mm	Height Mm max	Pad width mm
-80	1.7-3.0	25	15	0.25,1,2,10	2.2	6.0	
-70/ 71	3.0- 6	17	10/25	0.25,1,2,10,15,20	2.2	6.0	1.0/0.8
-68	3.7-12		20	0.2W	2.2	6.5	
-65	3.7 - 5.8	14	25	20,25	1.85	6.0	
-64	9.1-9.5	10	30	30	2.2	6.1	
-63	9.5-10.5	10	25	20	1.635	5.5	
-62	9.9-10.7	8	25	25	tba	tba	
-61	4 - 9	18	20/50	0.25,2,8,10,15, 20	1.85	5.5	0.43
-43	9.0-16.0	10	15/25/30	1,2,10,12, 15, 20*	1.65	5.65	0.43
-49	14.0-14.5	10	12	2, 10, 12 Max	1.50	4.6	

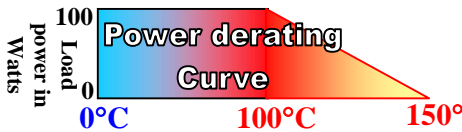


-43 20W load sticks out 0.5mm at the base of the unit
Ensure carrier temperature does not exceed 100C, Assumes infinite heat sink
Load temp to be kept < 100°C Units over 20W must be mounted on a good heat sink
Heat sink temperature must not exceed the maximum operating temperature specified

	Dimensions (Units: mm)				
	W	L	B	C	N
-80	20	30	25	15	10
-71	15	25	20	10	8
-70	15	25	20	10	9
-68	15	20	16	11	7.2
-65	12.7	24	19	7.7	9
64b	12.7	24	19.7	7.7	6.5
-63	9	19	14	6	7.5
-62	9	23	tba	tba	tba
-61	12.0	20	15	7	6.5
-43	10.2	17	14	7.4	7.0
-49	7.1	13.2	10.4	4.3	4.84

Operating Temp.	-40°C +70°C
Storage Temp.	130°C Max

Direction of RF:	
R	Default \blacktriangleright
L	\blacktriangleleft



Tolerance (w*I*h) + 0/- 0.04 mm,
pad position +/- 0.1mm
+/- 0.1 Holes/ slot centers

Specification may be subject to change
Do not heat above 130°C

Humidity 5-95% non-condensing
Max temperature during welding +350°C for 25msec
Extended Temperature range

At 80 °C, add 0.1 dB to Insertion Loss,
and subtract 1.0 dB from Isolation
At 90C °C, add 0.3 dB to Insertion Loss,
and subtract 4.0 dB from Isolation
At 100C °C, add 0.4 dB to Insertion Loss,
and subtract 5.0 dB from Isolation

Higher temperature parts with better spec available

Ordering information: example RDKF-3.7-4.2-70-1WR (Isolator)
Use part # in format as: RDKF-F_L-F_H-Model-Power_{rev} Direction
 F_L-Lower frequency-F_H Higher frequency, Model (70/61 etc),
 Reverse (load) Power (ie 1Watt) Power direction {R= Clockwise, or left to right (default) or L= Counter clockwise.}-Option

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-80	1.8-2.2	0.7 1.0	18 15	1.3 1.5		b	room -10 to +60, 1W
-80	1.8-2.2	0.6	17	1.3	0.7		-30°C +70°C
-80	1.9-2.4	0.6	17	1.3	0.7	e	-30°C +70°C
-80	1.9-2.6	0.6	17	1.3	0.7	e	500M Bw, -30 to +70
-80	1.9-2.6	0.6 0.8	18 16	1.30 1.40		b	room 0 to +60
-80	1.9-2.6	0.6 0.7	18 17	1.30 1.40		b 2/24/11	room -30 to +60 °C
-80	2.0-2.4	0.6 0.8	19 17	1.25 1.35		b	room, -10 to+60, 1W
-80	2.0-2.5	0.6	17	1.3	0.7		-30°C +70°C
-80	2.1-2.4	0.5	19	1.3	0.7	p	-30°C +70°C
-80	2.2-2.3	0.4	20	1.28	0.7	p	-30°C +70°C
-80	2.2-2.35	0.4	20	1.25	0.7	e	-30°C +65°C
-80	2.2-2.9	0.6	18	1.3			-10 to +50°C
-80	2.35-2.45	0.4	21	1.25	0.7	p	-30°C +70°C
-80	2.3-2.5	0.4	20	1.28	0.7	e	-30°C +70°C
-80	2.3-2.5	0.5 0.6	20 18	1.25 1.30		b 2/24/11	room -30 to +60 °C
-80	2.3-2.7	0.5	20	1.28	0.7	e	-30°C +70°C
-80	2.35-2.65	0.4	22	1.25	0.7		-30°C +70°C
-80	2.4-2.5	0.4	22	1.25	0.7	e	-30°C +70°C
-80	2.4-2.52	0.4	20	1.25	0.7	e	-30°C +65°C
-80	2.4-2.7	0.5	20	1.22	0.7	p	
-80	2.4-2.8	0.5	20	1.22	0.7	e	-30°C +70°C
-80	2.5-2.7	0.5	20	1.22			
-80	2.5-3.5 (500MHz BW)	0.6 0.8	18 17	1.3 1.4		b	room 0 to +50 °C
-80	2.7-2.9	0.4	20	1.2	0.7	e	-30°C +70°C
-71	2.9-3.1	0.5	20	1.25	0.8	b	special
-71	4.0-4.4	0.5	20	1.25	0.8	b	
-70	2.9-3.1	0.5	20	1.25	0.8	p	
-70	3.0-3.2	0.5	20	1.2		p	
-70	3.0-3.3	0.6	18	1.25	0.8		
-70	3.0-4.2	0.6	18	1.3	0.8		
-70	3.05-3.5	0.6	18	1.3	0.8	p	
-70	3.05-3.55	0.6	18	1.3	0.8	p	
-70	3.1-3.3	0.5	20	1.2	0.8		
-70	3.1-3.4	0.5	20	1.2	0.8		
-70	3.1-3.6	0.5	20	1.3		b	-30to70C
-70	3.1-3.6	0.6	18	1.25	0.8	e	
-70	3.2-3.4	0.5	20	1.2		p	
-70	3.3-3.5	0.4	20	1.25		e	-30°C +65°C
-70	3.3-4.1	0.6	18	1.30		b	
-70	3.4-4.2	0.5	20	1.25		b.e	
-70	3.4-3.6	0.5	20	1.2			

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-70	3.4-3.9	0.5	20	1.2			
-70	3.5-4.5	0.5	20	1.2		b	
-70	3.6-3.8	0.4	21	1.2			tbc
-70	3.6-4.2	0.5	20	1.25			
-70	3.6-4.4	0.6	20	1.3		b	
-70	3.7-4.2	0.4 0.5	20 18	1.25 1.30		b	+25 -10 to + 70°C, 15W
-70	3.75-4.25	0.5	20	1.2			
-70	3.8-4.2	0.5	20	1.2		b	
-70	3.8-4.2	0.5	20	1.25:1		b	
-70z	3.8-4.6	0.6	20	1.3		p	special marking on substrate "Raditek" "89I-1372P002"
-70	3.9-4.2	0.5	20	1.25:1		p	
-70	3.9-4.5	0.6	18	1.30		p	
-70	4.0-4.5	0.55	19	1.28			
-70	4.0-5.0	0.6	18	1.30		b	
-70	4.1-5.0	0.6	18	1.30		b	
-70	4.2-4.4	0.5	20	1.2			
-70	4.3-5.0	0.4	20	1.2		p	
-70	4.3-5.1	0.4	20	1.2			
-70	4.40-4.45	0.4	21	1.2		p	
-70	4.4-4.8	0.4	21	1.2			
-70	4.4-5.0	0.5	20	1.22		b	
-70	4.4-5.1	0.6	19	1.25		p	
-70	4.67-4.9	0.4	21	1.2		p	
-70	4.85-4.95	0.4	20	1.2		e	
-70	4.8-5.8	0.4	20	1.2		p	
-70	4.9-5.7	0.4	20	1.2			
-70	4.9-5.9	0.4	18	1.25			
-70	5.0-5.3	0.4	18	1.25		g	
-70	5.0-5.9	0.6	18	1.30		b	
-70	5.0-6.0	0.5	18	1.30		b	
-70	5.1-6.1	0.5	18	1.35		b	9-20-06
-70	5.25-5.85	0.5	18	1.35		p	9-20-06
-70	5.3-5.9	0.5	18	1.35		p	
-70	5.60-5.65	0.4	18	1.25		p	
-70	5.8-6.7	0.5	18	1.30		b	10W Rev /50W Fwd 60W 300W peak
-68	3.7-4.1	0.4	20	1.20:1			
-68	3.7-4.2	0.4	20	1.20:1			
-68	7-11	0.8	17	1.4		b	
-68	7.0-12.0	0.8	17	1.4			1W Fwd/1W Rev
-68	8.0-12.0	0.4	20	1.20:1			10W Fwd/2W Rev
-65	4.0-4.5	0.5	19	1.25		p	

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-65	4.4-4.6	0.4	22	1.25:1		b	
-65	4.4-5.1	0.5	20	1.22:1			
-65	4.4-5.0	0.5	20	1.22:1			
-65	5.2-5.9	0.5	20	1.25:1			
-65	5.3-5.6	0.4	20	1.25:1		b	
-65	5.8-6.5	0.5	20	1.25:1		b	-40 to +80
-65	8-12	0.7 1.0	20 17	125 1.40		b	room -55 to +85, 1 or 12WR/ 10W Fwd
-64	5.2-5.9	0.5	19	1.25:1		b	-20 to 70C
-64	9.1-9.3	0.5	20	1.22:1		e	
-63	9.1-9.3	0.6	18	1.25:1		e	25W Fwd/ 20WRRev, -40 to +70C
-63	9.5-10.5	0.6	19	1.30:1		e	-30 to 60C
-62	9.9-10.7	0.6	18	1.3		b	@-30 to 60C, 0.4/20/1.25 @ RT to be mounted on good heatsink, b
-61	4.35-4.65	0.4	20	1.25:1		e/b	
-61	4.39-5.01	0.5	18	1.25:1		p	
-61	4.4-4.6	0.45	21	1.20:1			
-61	4.4-4.7	0.45	21	1.20:1		p	
-61	4.4-5.0	0.5	20	1.22:1	0.43	e	
-61	4.4-5.5	0.5	18	1.25:1		e	
-61	4.0-6.0	0.7	18	1.35:1		b	
-61	4.85-5.05	0.5	20	1.25:1			
-61	4.9-5.0	0.5	20	1.25:1			
-61	4.9-5.8	0.5	20	1.25		b	
-61	4.9-5.9	0.4 0.9	20 16	1.25 1.40		b	Room -45 to +85
-61	5.0-5.3	0.6	18	1.35:1		p	20WR/100W Pk
-61	5.0-5.7	0.6	18	1.35:1		P	
-61	5.0-5.9	0.6	18	1.35:1		P	
-61	5.0-6.0	0.6	20	1.35:1		b	-10 to 70C
-61	5.0-6.0	0.5 0.6	20 18	1.25 1.30		b 2/24/11	room -30 to +70
-61	5.0-6.5	0.6	18	1.35:1		P	
-61	5.0-7.0	0.6	18	1.30:1		e	-20 to 70C
-61	5.0-7.0	0.7	18	1.35:1		B	
-61	5.0-7.2	0.7	18	1.35:1		p	
-61	5.1-5.3	0.5	20	1.25:1		e	-30 to 60C
-61	5.15-5.35	0.5	20	1.25:1		p	
-61	5.1-5.6	0.4	20	1.25:1		e 2-5-05	0 to 50C
-61	5.1-5.8	0.5	20	1.20:1			
-61	5.1-5.9	0.5	18	1.30:1		b	3WR/ 30W Fwd
-61	5.1-6.1	0.6	18	1.30:1		e	-20 to 70C
-61	5.2-5.4	0.5	20	1.25:1			
-61	5.2-5.5	0.3	20	1.20:1		e	-20 to 60 p

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-61	5.2-5.6	0.5	20	1.25:1			
-61	5.2-5.9	0.5	20	1.25:1		e 2-8-05	-40 to 70C
-61	5.2-5.9	0.5	20	1.25:1		20 / 20W	-40 to 70C
-61	5.2-6.2	0.6	18	1.30:1		Full temp b	-20 to 70C e
-61	5.3-5.6	0.5	20	1.20:1			
-61	5.3-5.9	0.5	20	1.20:1		p	-30 to 70C
-61	5.4-5.7	0.5	20	1.20:1			
-61 (C)	5.4-5.9	0.4	20	1.25:1		b	-10 to +60
-61	5.47-5.73	0.5	20	1.20:1			
-61	5.47-5.725	0.5	20	1.20:1			
-61	5.6-6.0	0.5	20	1.20:1		p	
-61	5.6-6.0	0.4 0.5	20 18	1.20:1 1.30		b	Room -30 to 70C
-61	5.6-7.4	0.8	18	1.35:1		p	
-61	5.8-7.2	0.75	18	1.35		b	
-61	5.625-6.825	0.7	19	1.30:1		e	
-61	5.6-6.5	0.5	20	1.25:1		e	
-61	5.6-8.5	0.8	18	1.35:1		e, b	
-61	5.7-5.9	0.5	20	1.25:1		e	-30 to 60C
-61	5.7-5.9	0.4 0.5	20 18	1.25:1 1.3		b	Room -30 to 70C
-61	5.7-6.0	0.5	20	1.25:1		p	
-61	5.7-7.1	0.5	18	1.3:1		b	-30 to +85 °C, 0.5/20/1.3 @ RT 0.6/18/1.35 @ -10 to 70C
-61	5.7-7.1	0.5	20	1.25:1		e	CM
-61	5.8-6.4	0.5	20	1.25:1			
-61	5.8-6.5	0.5 0.6	20 18	1.25:1 1.30:1		b	+25 -30 to +60C
-61	5.8-6.6	0.5	20	1.25:1		p	
-61	5.8-6.7	0.6	18	1.3:1		b	10W/50Wfrd
-61	5.8-7.2	0.5 0.7	20 16	1.3 1.4		b	+25 -30 to +85 °C, b
-61	5.8-7.2	0.4 0.5	20 18	1.25 1.30		b	+25 -30 to +70 °C, 2W, b
-61	5.85-7.02	0.5	20	1.25:1		p	
-61	5.8-7.2	0.6	18	1.30:1		b	
-61	5.8-7.2	0.6	20	1.3:1	-30 to +85 °C	e	0.4/21/1.2 @ -10 to +60 °C
-61	5.8-8.5	0.8	18	1.35:1			
-61	5.85-6.15	0.4	20	1.25:1		e/b	
-61	5.9-6.1	0.5	20	1.25:1			
-61	5.9-6.4	0.5	20	1.25:1		e	
-61	5.9-6.5	0.6	18	1.3:1		e	9-30-05
-61	5.9-6.5	0.4 0.5	20 18	1.25 1.30		b	room -30 to +60, 15W to be mounted on the heatsink
-61	5.9-7.2	0.65	18	1.30:1			

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-61	5.9-7.5	0.7	18	1.30:1			
-61	6.0-8.0	0.7	18	1.35:1		b	
-61	6.0-8.5	0.6	18	1.3:1		b	
-61	6.3-8.0	0.5	20	1.25		e	-30 to +70 °C
-61WB	6.0-18.0	1.4	10	1.9:1		b	Height 5.00mm max
-61	6.1-7.3	0.5	20	1.25:1		b	
-61	6.2-7.4	0.4	20	1.25		b	
-61	6.3-6.5	0.5	20	1.25:1		p	
-61	6.4-6.5	0.4	20	1.25:1		P	
-61	6.4-7.1	0.5	20	1.25:1		P	
-61	6.425-7.125	0.5	20	1.25:1		P	
-61	6.4-7.2	0.5	20	1.25:1			
-61	6.4-7.4	0.6	19	1.30:1		p	
-61	6.4-7.6	0.7	18	1.35		p	
-61	6.5-6.9	0.4 0.5	20 18	1.25 1.30		b	room -30 to +60, 15W to be mounted on the heatsink
-61	6.6-6.8	0.4	20	1.25:1		e	-30°C +65°C
-61	6.6-7.8	0.7	18	1.35		p	
-61	6.7-7.15	0.5	20	1.25:1		p	
-61	6.7-7.2	0.5	20	1.25:1			
-61	6.8-7.2	0.5	20	1.25:1			
-61	6.9-8.1	0.6	19	1.30:1		p	
-61	7.0-9.0	0.7	18	1.3:1		b	
-61	7.0-10.0	0.7	18	1.3:1		b	
-61	7.125-7.725	0.5	20	1.25:1		e	
-61	7.1-7.7	0.5	20	1.25:1		p	
-61	7.1-7.8	0.5	20	1.25:1		e	-30 to 60C
-61	7.1-7.9	0.45	20	1.25:1		e	
-61	7.1-8.5	0.5	20	1.35		b	4W Rev/10W Fwd
-61	7.1-8.5	0.4	20	1.22:1			
-61	7.1-8.6	0.4	20	1.22:1			STD Low Power
-61	7.1-8.6	0.5	20	1.25:1			20W/20W hp ferrite
-61	7.2-8.5	0.45	20	1.25:1		e	
-61	7.4-7.8	0.4	20	1.25			
-61	7.4-7.8	0.4 0.5	20 18	1.25 1.30		b	room -30 to +60, 15W to be mounted on the heatsink
-61	7.7-8.5	0.45	20	1.25:1		e	
-61	7.725-8.5	0.4	20	1.22:1			
-61	7.8-8.5	0.5	20	1.25:1		p	
-61	7.8-8.7	0.5	20	1.25:1		b	
-61	7.85-8.15	0.4	20	1.25:1		e/b	
-61	7.9-8.6	0.45	20	1.25:1		e	
-61	7.9-8.5	0.45	20	1.25:1		e	
-49	13.75-14.5	0.6	20	1.3		b/e	12w max 4x4mm load

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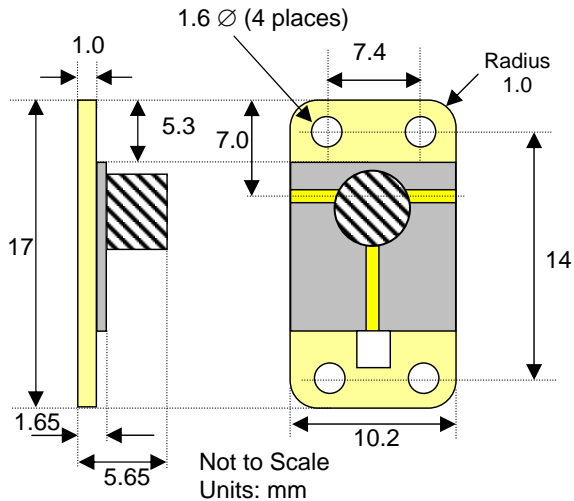
-recommend RADC MS51 series over 6GHz

Model foot print	Freq. GHz	Insert Loss dB	Isol. dB	VSWR	Pad width mm	Code	Comments
-49	12.75-13.25	0.5	20	1.25		b	-40 to 75C
-43	8.8-10.2	0.6	18	1.25:1		e	5-3-07
-43	8-12	0.8 1.0	16 14	1.40:1 1.55:1		b	room -10 to +70
-43	9.0-9.2	0.5	20	1.25:1		e	
-43	9.0-9.5	0.5	20	1.25:1		e	
-43	9.0-9.5	0.5	20	1.25:1		b	
-43	9.0-10.0	0.5	23	1.25:1		e	CM tbc
-43	9.0-10.5	0.6	20	1.3:1		b/e	20 watts (b)
-43	9.1-9.3	0.5	20	1.25:1		b	
-43	9.3-9.5	0.5	20	1.25:1		b	
-43	9.1-9.5	0.5	20	1.25:1		b	
-43	9.2-9.6	0.5	20	1.25:1		p	
-43	9.2-9.8	0.5	20	1.25:1		p	
-43	9.5-10.5	0.5	20	1.25:1		b	25W Fwd /12W Rev , -40 to +70
-43	9.5-10.5	0.5	20	1.25:1		e	25W fwd /12W rev e 20w fwd/15w rev
-43	9.5-10.5	0.5	20	1.25:1		b only	30W fwd//12rev
-43	9.5-10.5	0.5	20	1.25		b	+25
5080		0.6	18	1.30			-50 to +80°C
-43	9.5-10.5	0.5	20	1.25		b	+25
55100		0.6	17	1.40			-55 to +100°C
-43	10-15	0.8	15	1.5:1		b	room
-43		1.0	14	1.6:1			-10 to +70
-43	12.5-14.0	0.5	20	1.22:1		b	15W Rev/ 15W Fwd
-43	13.8-15.7	0.5	20	1.22:1		b	15W Rev/ 15W Fwd

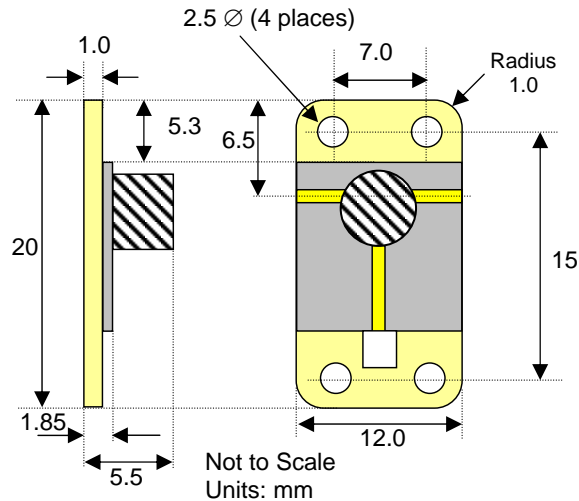
RDKF Isolators / RDKC Circulators

4 Hole models: Microstrip isolators and circulators (1.7 to 16.0 GHz)

-recommend RADC MS51 series over 6GHz



Cross section of the -43 isolator:



Cross section of the -61 isolator:

We have exhaustively tested the Microstrip Drop in's.

Units passed all shock and vibration test.

The units have low mass and are very robust.

- Vibration in frequency range 1-5000Hz with acceleration 400m/sec² (40g)
- repeated shocks with acceleration 1500m/sec² (150g) and duration 1-5msec
- single shock with acceleration 15000m/sec² (1500g) and duration 0.1-2msec
- linear centrifugal acceleration 5000m/sec²
- acoustic noise 50-10000Hz at sound pressure level up to 170dB
- absence of resonance in frequency range 1-100Hz