

RDKF Isolators

2 Hole models: Microstrip isolators (6 to 36 GHz)

-For Circulators see RADC MS series over 6GHz

The RDKF series of isolators is 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: 2 hole models								
Model foot print	Frequency (GHz)	Maximum bandwidth available %	Max. Fwd power (W)	Available loads. Watts	Pad height mm X	Height max Y	Pad width mm	Equiv. to:
-62	3.4-6.7	8	25	25	tba	tba		
-51	6 to 13	10	10	1,6,10 (10W load 3.3mm max)	1.65	5.5	0.43	FDK
-42	9-15	24	20	10,15, 20	1.65	5.5		FDK
-41	9-15	24	15	1, 3,5,10,15	1.65 1.40	5.5	0.45	FDK.
-41	14-17	20	15	1, 3,5,10,15 **	1.50 1.40	5.5	0.356	FDK
-41	17-20	20	15	1, 3,5,10,15	1.65 1.40	5.5 (4.2)	0.35	FDK (<opt).
-40	10-23	24	1,2	0.25, 0.5, 1, 2	1.65	5.5		FDK
-40T	20-23	10	2	1	1.65	5.5		TDK
-39	9-15		5	1	1.65	5.0		Special
-31	17-31	8	6	1	1.50	5.0	0.25	FDK
-21	18-36	8	5, 6	1,2, 6	1.55	5.0	0.17	FDK
-11	32-43	10	5	1, 3	1.14	4.5	0.14	

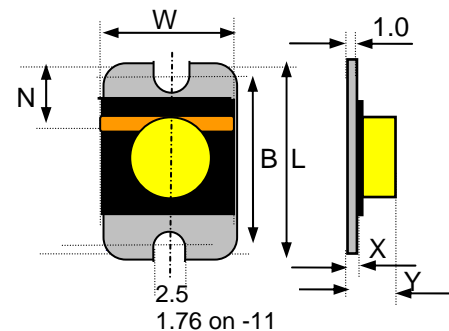
** 20W load can be fitted but will touch the top of the slot, special care with mounting screw

Operating Temp.	-40 to +70°C
Storage Temp.	-40 to +85°C

Direction of RF:	
R	Default →
L	←

Units: mm

Model	W	L	B	N
-62	12	23	tba	6
-51	9	19	14	7.5
-42	7	21.5	17.5	7
-41	7	19.5	15.5	6
-40	7	16	12	6
-40T	7.11	16	12	6
-39	7	13.2	12.4	4.5
-31	6	17.5	13.5	6.15
-21	5	16.5	12.5	6.1
-11	3.38	14.0	11.0	4.75



Radius:
-0 opt 0.25 - 0.5 standard (default)
-1 opt 1.0-1.5 (special)

Ordering information: example RDKF-17.7-19.7-41-1WR (Isolator)

Use part # in format as: RDKF-F_L-F_H-Model-Power_{rev} Direction

F_L-Lower frequency-F_H Higher frequency, Model (40/41 etc),
Reverse (load) Power (ie 1Watt) Power direction {R= Clockwise, or left to right (default) or L= Counter clockwise.}-Option

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

**Tolerance (w*1*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

RDKF Isolators / RDKC Circulators

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

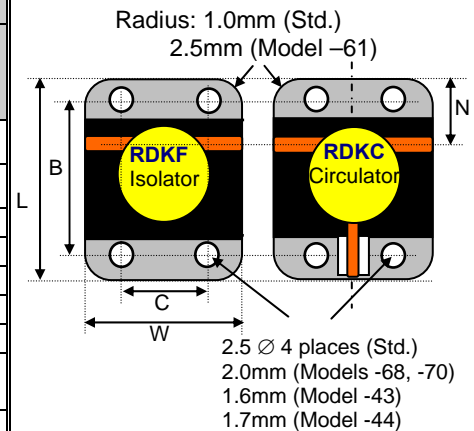
-recommend RADC MS51 series over 6GHz

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	* See page 10
-78	2.8-3.7		10	5		6.0	* See page 10
-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	
-61	4 - 9	18	20/50	0.25,2,8,10,15, 20	1.85 (2.45)	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	

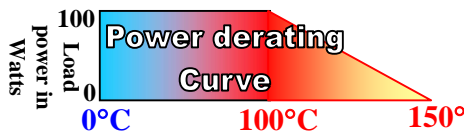


-43 20W load sticks out 0.5mm at the base of the unit
 Ensure carrier temperature does not exceed 100C, Assumes infinite heat sink
 Load temp to be kept < 100°C Units over 20W must be mounted on a good heat sink
 Heat sink temperature must not exceed the maximum operating temperature specified

Dimensions (Units: mm)						
	W	L	B	C	N	
-80	20	30	25	15	6.5*	
-78	15	28	23	10	9	
-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	
-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 to +70°C
Storage Temp.	-40 to +85°C

Direction of RF:		
R	Default	▶
L		◀



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

Specification may be subject to change
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Humidity 5-95% non-condensing

Max temperature during welding +350°C for 25msec

Extended Temperature range

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 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