

RADITEK INC.

Wide band isolators (Peripheral Mode)

RADI- 1-3 // 1-4.3 // 2-6 // 2-8.2 // 2-18 // 3.2-8.3 // 8-18 // -P-S3-1W-02

Note: isolator version only, no circulator option

> 3 Octave Coverage

If F_{hi} / F_{lo} is > 3 a peripheral mode must be used

Mounting Option -01 (No Mounting Holes) // -02 (With Mounting Holes - Default) see following pages



SMA Connector options (X)		
Isolator		
Port 1	Port 2	
Female	Male	-1
Male	Female	-2
Female	Female	-3
Male	Male	-4

Tolerance (unless otherwise stated):

Hole diameter ±0.004
 Dimensions ±0.015
 Machined surfaces 63√
 Flatness ±0.001/inch
 Bend radius 1/32 inch

**Order Examples: RADI-2.0-18.0-P-S3-1WR-02
 I=ISOLATOR**

Direction of RF:

R	Default	▶
L		◀

Hole Option

-01	No-Holes
-02	Default w/Holes

Standard Bands (additional bands – see page 2)

Frequency	Insertion loss dB (max)		Isolation dB (min)		VSWR (Maximum)		Peak Power Watts	Rated Power (Fwd) Watts (avg)	Rated Power (Rev) Watts (avg)	Operating Temperature °C
	GHz	+25°C	Over Temp	+25°C	Over Temp	+25°C				
1 to 4.3	2.0	2.2 ³	20	15 ⁴	1.50:1	1.60:1	35	10	1	-10 to 60
2 to 8.2	1.5 ¹⁰	1.5	20	17	1.50:1	1.50:1 ¹	35	10	1	-10 to 60
2 to 18	3.5	4	14-15 ⁸	10	1.77:1	1.80:1	35	10	1	-10 to 60
3.2-8.3	0.9	1.0 ²	20	20	1.50:1	1.50:1	35	10	1	-10 to 60
8 to 18	1.0	1.1	20	20	1.50:1	1.50:1	35	10	1	-10 to 60

Notes:

- (1) VSWR <1.6 (2.0-2.1GHz)
- (2) <1.2dB (3.2-3.3GHz)
- (3) <3.5dB (1.0-1.3GHz)
- (4) <13dB (4.0-4.3GHz)
- (5)-S_{P1} performance 8-10GHz, Isolation:23, VSWR: 1.4

- (6) Preliminary Spec - tbc
- (7) <2.5dB IL (2.0-2.5GHz) @Temp Extremes
- (8) 10.5-11dB @ 18GHz
- (10) 1.8dB from 8.0-8.2GHz

POWER (In all -P Peripheral mode Isolators)

Maximum Peak Power 35W
Maximum Average Forward power 10W
Maximum Average Reverse / Load Power 1W
 (unless otherwise stated):

1. Distance from the top and bottom to any ferromagnetic substance (i.e. steel kovar or other magnet) including another Isolator or Circulator is >30mm
2. Distance from the sides >10mm

RADI-Peripheral Mode Isolators Generic-b

Specifications may be subject to change

09/21/09

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

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> 3 Octave Coverage

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Frequency GHz	Insertion loss dB (max)		Isolation dB (min)		VSWR (Maximum)		Peak Power	Rated Power (Fwd)	Rated Power (Rev)	Operating Temperature
	+25°C	Over Temp	+25°C	Over Temp	+25°C	Over Temp	Watts	Watts (avg)	Watts (avg)	°C
0.8-3.0	4.0	6.0	12	11	1.7	2.0	35	10	1	preliminary -10 to 60
0.869-2.170	2.5	3.0	14	13	1.6	1.6	35	10		0 to +50
0.95-2.15	1.5	2.0	20	18	1.5	1.6	35	10	1	-10 to +70
1-3	2.0	3.5 ³	25	20	1.50:1	1.60:1	35	10	1	-10 to 60
*1-4.3	2.0	2.2 ³	20	15 ⁴	1.50:1	1.60:1	35	10	1	-10 to 60
2- 6	1.4	1.5	20	17	1.50:1	1.50:1	35	10	1	-10 to 60
2-6 * M# 4080	1.4	2.0 ⁷	20	15	1.50:1	1.60:1 ¹	35	10	1	-40 to 80
2-7	1.5	1.6	20	17	1.50:1	1.60:1 ¹	35	10	1	-10 to 60
2-8.2 (SMA)	1.5 ¹⁰	1.5	20	17	1.50:1	1.50:1 ¹	35	10	1	-10 to 60
2-8.2 (N-type)	1.5	1.7	20	17	1.50:1	1.60:1	35	10	1	-10 to 60
2-10	2.5	2.8	17	16	1.70:1	1.75:1	35	10	1, 2	0 to +50
2-17	3.5	4.0	14	12	1.77:1	1.80:1	35	10	1	-10 to 60
2-18	3.5	4.0	14-15 ⁸	10	1.77:1	1.80:1	35	10	1	-10 to 60
2-18 -SP1 ⁵	3.5	4.0	14-15 ⁸	10	1.77:1	1.80:1	35	10	1	-10 to 60
2-18	3.5	4.0	10	10	1.77:1	1.80:1	35	10	1	-10 to +70
3.2-8.3	0.9	1.0 ²	20	20	1.50:1	1.50:1	35	10	1	-10 to 60
3.35-12.8		2.0		18		1.50:1	35	10	1	-32 to +70
3.5-10.5	1.5	1.7	15	15	1.50:1	1.55:1	35	10	1	-10 to 60
5-14 ⁶	2.0		20		1.77:1	1.80:1	35	10	1	-10 to 60
6-18 ⁶	1.6	1.8	17	15	1.50:1	1.60:1	10	10	1	-10 to 60
6-20	1.5	1.7	14	11	1.50:1	1.60:1	35	10	1	-10 to 60
7.8-18 (-Z1)		1.2		18		1.5	35	10	1	0 to +60
8-18	1.0	1.1	20	20	1.50:1	1.50:1	35	10	1	-10 to 60
10-18	1.0	1.1	20	20	1.50:1	1.50:1	35	10	1, 2	0 to +50

*see PIN interface option on page 7
-RUG: Ruggedized for Airborne use

Option:-z1

Temperature	Operating	0 to +60°C
	Non-Operating	-30 to +60°C
Humidity	95%RH at +45°C	
Operating Vibration	10mm peak to peak at 2 to 14Hz 4G at 14 to 50 Hz	
Shock	20G at 11ms (Non-Operating)	

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Note: isolator version only, no circulator option

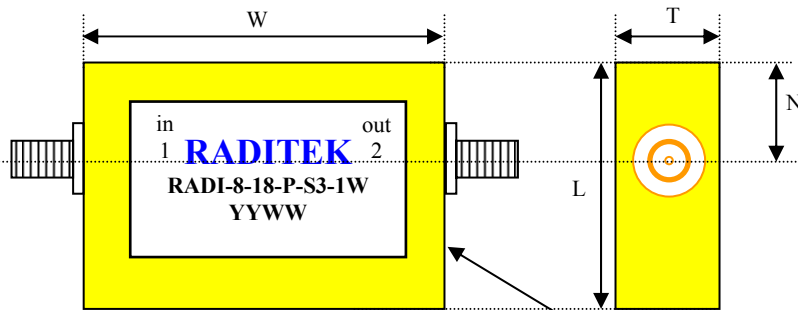
> 3 Octave Coverage

If F_{hi} / F_{lo} is > 3 a peripheral mode must be used

Mounting Option:-01 (No Mounting Holes)

ie ** RADI-2-6-P-S3-1WR-01-4080C-b

Units: mm
Not To Scale



Mounting Option:-01 Dimensions

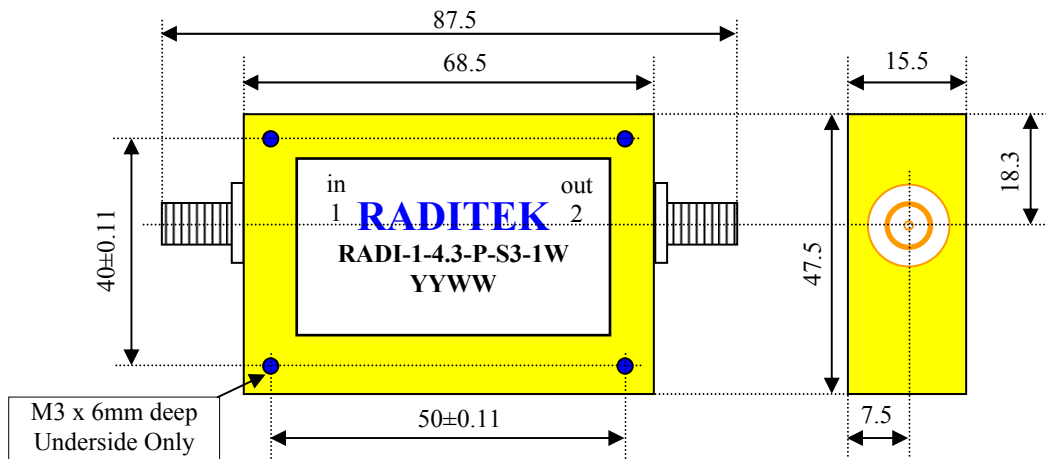
Freq.GHz	W	L	T max	N	Weight (gms)
800M-3G	68.0	47.0	15.10	18	
0.869-2.170	68.0	47.4	16.5		
1-4.3	68.5	47.5	16.5	18.3	300
1-3					13
2-6	48	35	12	14	
2-7					
2-8.2					
2-17	45	44	12		
2-18	45.8	43.5	12	22	156
3.2-8.3	38	33	12	15	100
3.5-10.5	45	44	12		
5-14*	48.5	44	12	tba	tba
6-18	46.5	37.5	12	tba	tba
6-18	30	28	10	tba	tba
6-20	45	44	12		
8-18	23	25	10	12	60

Notes:

- (1) VSWR < 1.6 (2.0-2.1GHz)
- (2) < 1.2dB (3.2-3.3GHz)
- (3) < 3.5dB (1.0-1.3GHz)
- (4) < 13dB (4.0-4.3GHz)
- (5) SP1 performance 8-10GHz, Isolation:23, VSWR: 1.4
- (6) Preliminary Spec - tbc
- (7) < 2.5dB IL (2.0-2.5GHz) @Temp Extremes
- (8) 10.5-11dB @ 18GHz
- (10) 1.8dB from 8.0-8.2GHz

No side mounting plate screw protrusion

Mounting Option -02 (Mounting Holes) 1-4.3 GHz // 1-3 GHz, // 800-3000M



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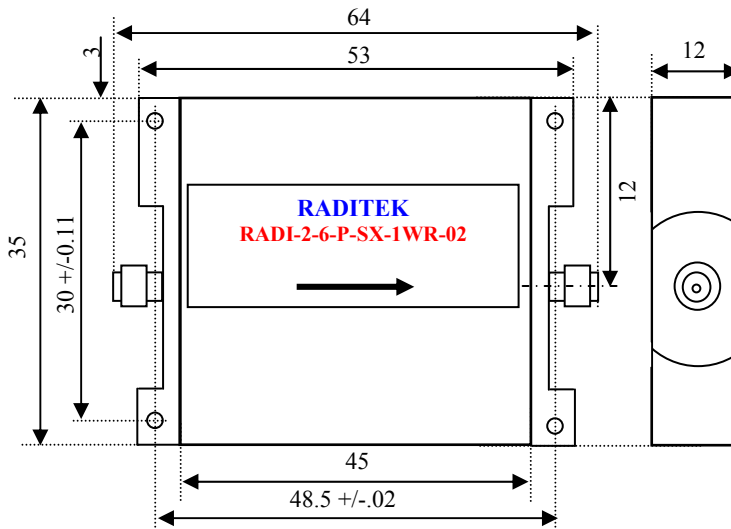
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Note: isolator version only, no circulator option

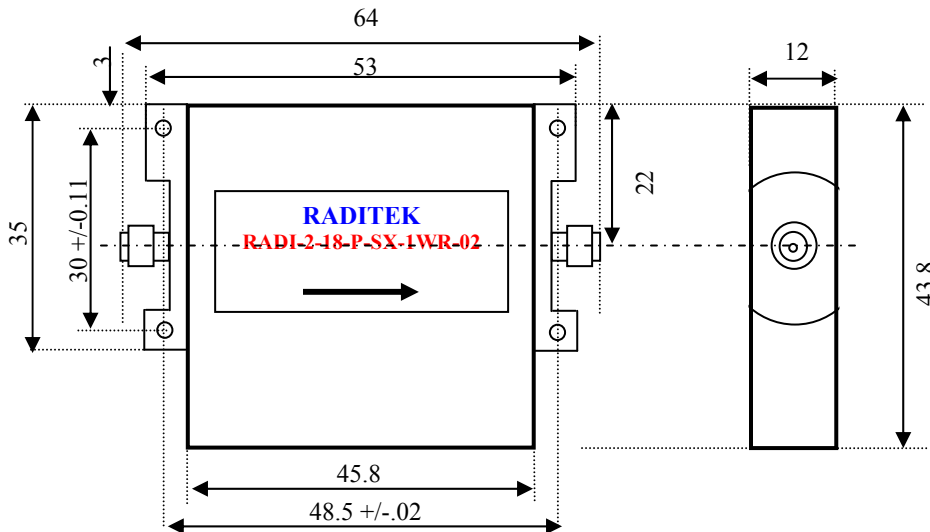
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Mounting Option -02 (Mounting Holes) 2-6 GHz / 2-8.2 GHz/ 2-10GHz



Mounting Option -02 (Mounting Holes) 2-18 GHz or 5-15 GHz



ROHS Compliant

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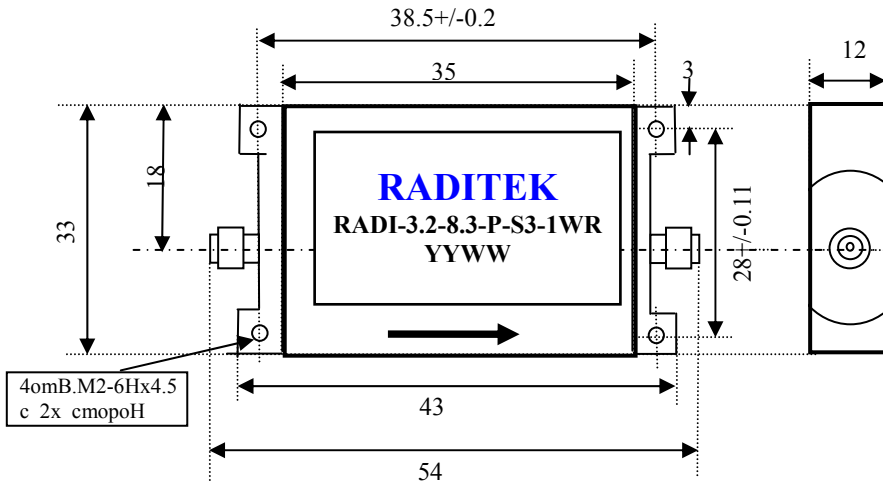
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Note: isolator version only, no circulator option

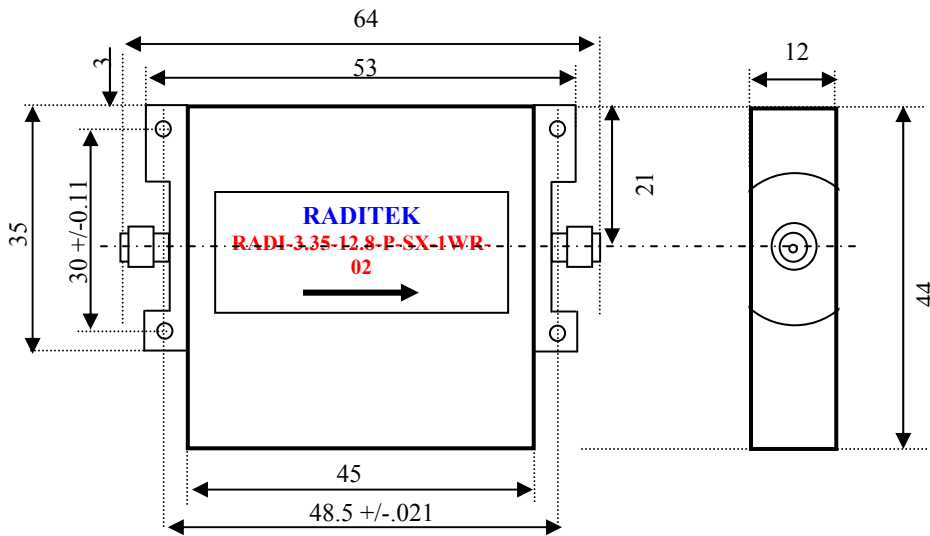
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If Fhi / Flo is > 3 a peripheral mode must be used

Mounting Option -02 (Mounting Holes) 3.2-8.3GHz



Mounting Option -02 (Mounting Holes) 3.35-12.8 GHz



ROHS Compliant

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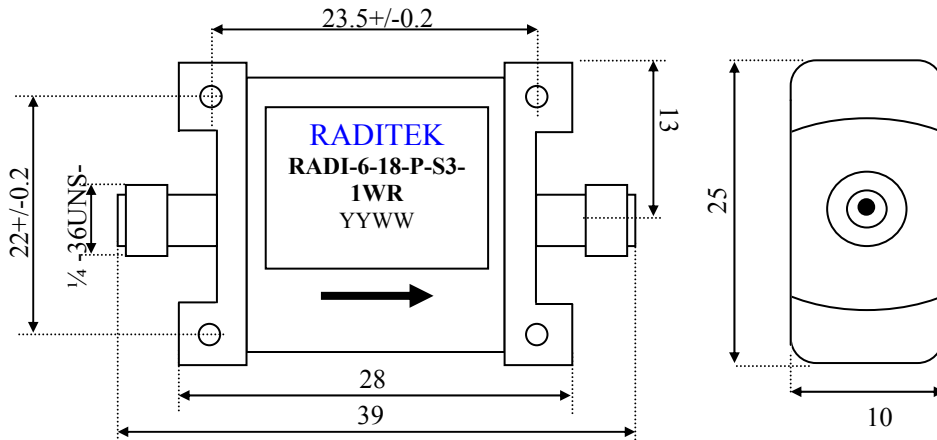
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Note: isolator version only, no circulator option

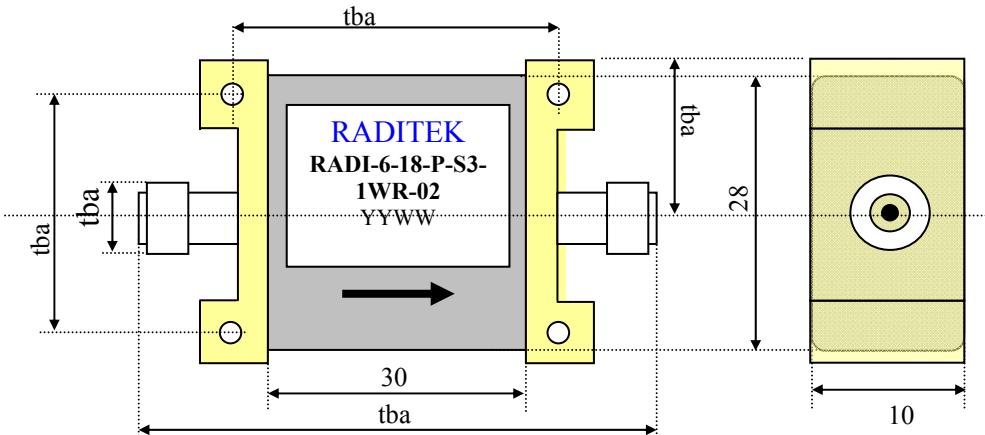
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Mounting Option -02 (Mounting Holes) 10-18GHz



Mounting Option -02 (Mounting Holes) 6-18GHz



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If Fhi / Flo is > 3 a peripheral mode must be used

Pin Interface Option

