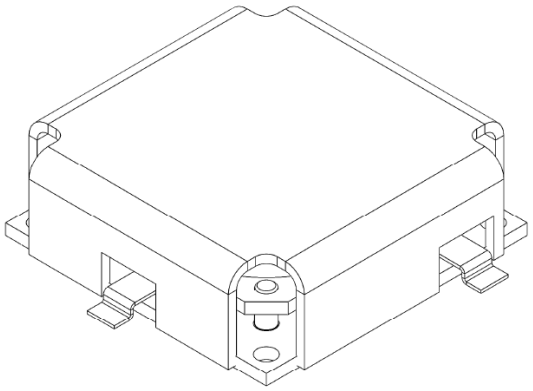

- Compact drop-in circulator in stripline technology
- Small size, low profile & light weight
- Low insertion loss and high isolation
- High peak and average power capability including operation into short circuit
- Solder tabs to PCB
  4x M3 bolted assembly to heat sink
- Designed for protection of SSPAs
- RoHS compliant

Parameter	Value	Remark
Footprint Drawing No.	t.b.d.	
Product Type	Circulator	
Configuration	3-Port T-Junction	
Center Frequency f_0	500 MHz	
Bandwidth BW	± 4 MHz	
Forward Peak Power	1000 W cw	
Forward Average Power	1000 W cw	
Reverse Power	100% of forward power	at any phase
Insertion Loss	≤ 0.25 dB	
Return Loss	≥ 23 dB	
Isolation	≥ 25 dB	
Insertion Phase Match	± 5° unit-to-unit	
RF Waveguide	Strip line, 50 Ω	
RF Connectors	Solder tab (3x)	
Dimensions	51 x 51 x 16 mm^3 (max)	
Weight	176 g ± 10%	
Mounting	4x mounting hole Ø 3.4mm	
Ambient Temperature Range	15°C to +40°C	operational
	0°C to +60°C	storage
Cooling	The circulator needs to be mounted on a water cooled base plate.	The circulator body temperature must not exceed 40°C.

Notes:

1 Circulator Characteristic Power Capability: The circulator is designed to operate above ferromagnetic resonance to offer lowest loss and highest peak power capability. The device is designed to handle full forward power into a 100% reflective short-circuit at port 2, covering all phase angles, without breakdown. The isolated port 3 of the circulator must be terminated with a reliable dummy load.

2 Low-Power Factory Tests: The following tests will be performed at the AFT factory before shipment:
(1) small-signal network analyzer measurements of insertion loss, isolation, and return loss vs. frequency at the ambient room temperature of 22°C ± 4°C, for all ports and signal paths.

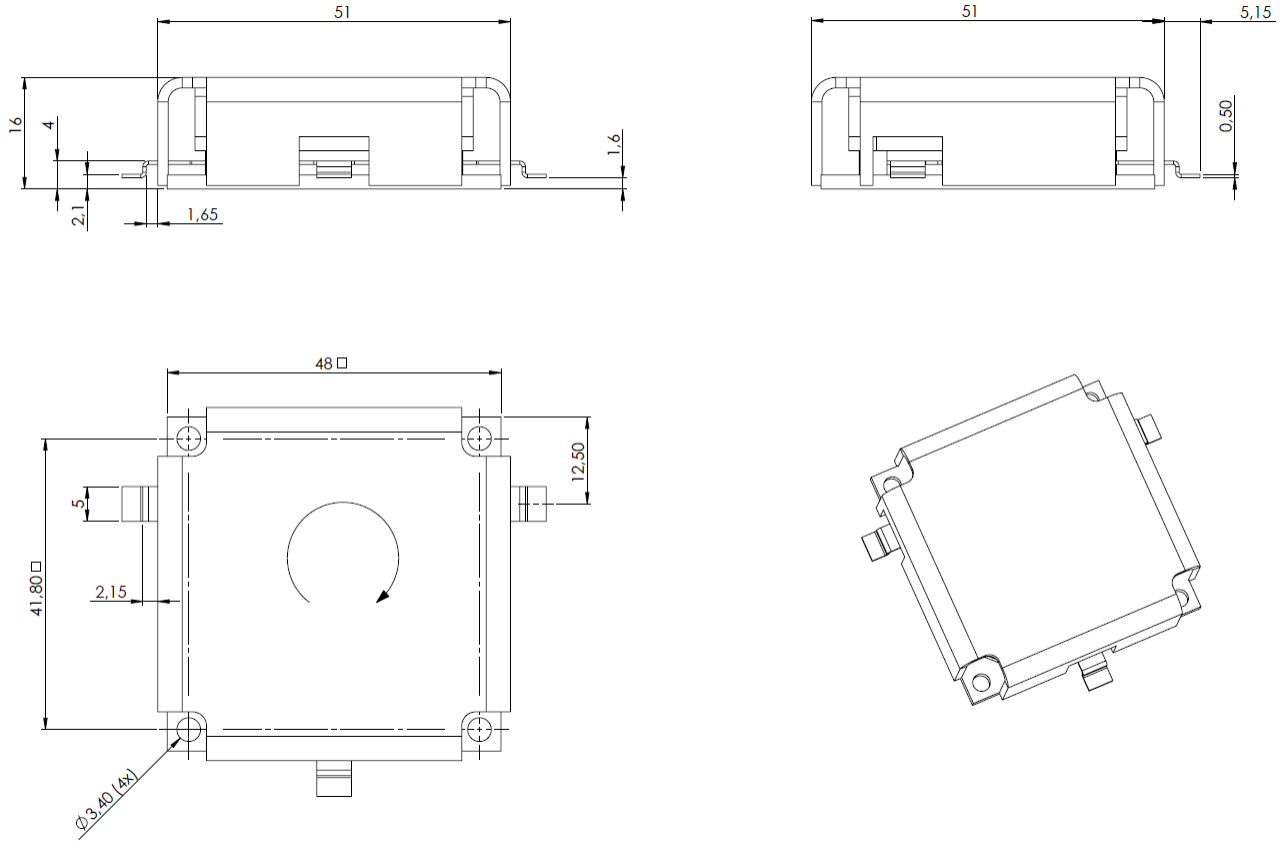

Fig. 1: Footprint drawing of drop-in circulator 500MHz 2”

Rev.	Remark	Date	Name
00	initial	01.03.2021	C. Weil
01	Formal update , 1000W	30.03.2022	C. Weil