

DATASHEET - WR42SW

rev A

WR42 waveguide transfer switch		min	typ	max	unit	note
1.0	General	The WR42SW is a 4-port latching waveguide transfer switch. The 2-channel rotary switch is operated by linear solenoids and features a dedicated control board with position detectors. The switch is intended for the 1.2cm Ham Radio band. The most common application is antenna switching between TX- and RX-systems.				
1.1	RF frequency		24.05		GHz	
1.2	Insertion loss			0.3	dB	
1.3	Port return loss	25			dB	all ports terminated
1.4	Isolation	50			dB	
1.5	Power handling, CW, 100% duty	100			W	
1.6	Waveguide ports	4 x WR42			(WG20, R220)	
1.7	Switch-over time			50	ms	
1.8	Dimensions	90 x 62 x 40			mm	overall
1.9	Weight		TBA		g	
1.10.1	Mounting	Waveguide ports	4 x M3 inner thread			
1.10.2		Switch assembly	4 x M3 inner thread			
1.11	Operational temperature range	-25		+55	°C	
1.12	Humidity protection	none				
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>State-A</p> </div> <div style="text-align: center;"> <p>State-B</p> </div> </div>						

Switch Controller		min	typ	max	unit	note
2.0	Description	<p>The Controller Includes the following functions:</p> <ul style="list-style-type: none"> • Boost converter for the actuators (solenoids) • Dual switch position detectors • PA sequencer • Default port selector switch • LNA supply 				
2.1	Block diagram	<pre> graph TD Vcc[Vcc] --> Controller[PA3AXA WG SWITCH Controller] PTT_in[PTT in] --> Controller Controller --> PA_enable_out[PA enable out] Controller --> solenoid_B[solenoid B] Controller --> LNA_out[LNA out] Controller --- gnd[gnd] solenoid_A[solenoid A] --- Controller </pre>				
2.4	Supply voltage, Vcc	10		15	VDC	
2.3	Supply Current, average		TBA		mA	
2.4	PTT input	0		15	V	active high- or low selectable
2.5	PA_enable output	0		15	V	active high- or low selectable
2.6	PA_enable delay	70 or 100		ms	selectable	
2.7	Default switching state (RX)	state-A or state-B		selectable		
2.8.1	LNA supply voltage		9.0		V	
2.8.2	LNA supply current supply capability			200	mA	