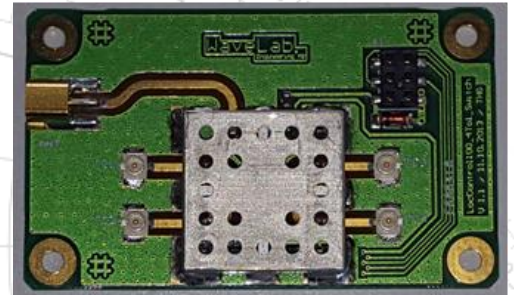


WLE7145A 4 to 1 RF-Switch up to 3GHz

- 100MHz to 3GHz
- Path to path isolation > 23dB @1GHz
- Operating voltage +5 VDC
- Temperature range -25 to +70°C
- Very low power consumption



This assembly unit is a 4 to 1 High Frequency Switch for a dedicated Swiss customer used in combination with a railway remote control unit. The RF switch position is defined by three digital control signals. The isolation is guaranteed from > 23dB up to 1GHz, at 434MHz the isolation is typical 34dB. The ESD protection meets Class 2 requirements (2kV HBM) and at the joint antenna connector even Class 3 (4kV HBM). The switch assembly works in a temperature range from -25 to +70°C within the guaranteed values.

Item		Value	Unit	
Technical specifications	Insertion loss of active path	100MHz – 1GHz	< 1.2	dB
	Insertion loss of active path	1 – 3GHz	< 2.2	dB
	Path to path isolation	100MHz – 1GHz	> 25	dB
	Path to path isolation	1 - 3GHz	> 18	dB
	HF-Input power, at one port	max.	+30	dBm
	Return loss of active path	100MHz – 1GHz	< -20	dB
	Return loss of active path	1 – 3GHz	< -12	dB
	Switching time between two ports	typ.	15	µs
	Power supply		over 6-pronged plug X1	
	Power input in connected status	max. @5VDC	0.25	mA
		typ. @5VDC	0.15	mA
	Supply voltage	nominal	+5	VDC
		min/max	+3.0 / +6.0	VDC
	Switching threshold digital input	typ. (low/high)	<0.8 / >2.5	VDC
	Input connectors (4 pieces)	on PCB-surface	U.FL series from HiRose (m)	
	Temperature range	Usage	-25..+70	°C
		Storage	-55..+85	°C
	Humidity, non condensing	max.	95	% RH
	Finish PCB		Solder resist, shield housing	
	Dimensions	ca.	30x50x5	mm
Weight	typ.	5	g	
Housing		none		
Mounting	M2 or similar	4-whole		



Truth table of pin assignment and control line X1:

Pin	Name	Description
1	VCC	+5V, 50mAmax
2	GND	0V
3	TC1	Transceiver 1 active (0V: not active, 3.3V active)
4	TC2	Transceiver 2 active (0V: not active, 3.3V active)
5	TC3	Transceiver 3 active (0V: not active, 3.3V active)
6	TC4	Transceiver 4 active (0V: not active ,3.3V active)

