

# Xtra Long Life Transfer Switch

50Ω DC to 18 GHz

## MTS-18XL-B+

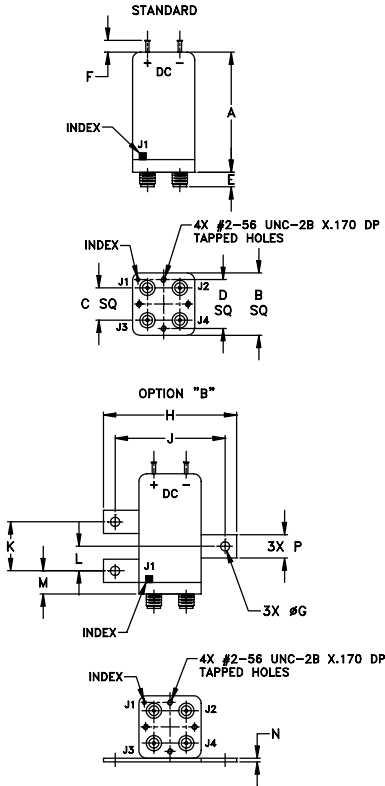


### Maximum Ratings

Operating Temperature	-15°C to +45°C
Storage Temperature	-15°C to +85°C
RF Power (any single port)	10W
Control Voltage	26VDC

Permanent damage may occur if any of these limits are exceeded.

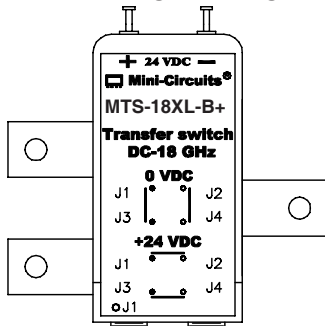
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
1.97	1.02	.53	.800	.240	.19	.150	2.18	1.800	.800	.400	.380	.06	.38	grams
50.04	25.91	13.46	20.32	6.10	4.83	3.81	55.37	45.72	20.32	10.16	9.65	1.52	9.65	70

### Marking Drawing



#### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- low insertion loss, 0.2 dB typ.
- high isolation, 85 dB typ.
- high power handling, 10W
- ultra reliable
- break-before-make configuration
- failsafe microwave transfer switch
- protected by US Patents 5,272,458; 6,414,577; 6,650,210; 7,633,361; 7,843,289

### Applications

- (ATE) automatic test equipment
- reliable "sleeptime" switching
- redundancy switching for microwave radio

### Electrical Specifications

FREQUENCY (GHz)	INSERTION LOSS (dB)		ISOLATION (dB)		VSWR (:1)		DC CURRENT @+24V (mA)		RF POWER COLD SWITCHING (W)	RF POWER HOT SWITCHING (W)	
	Typ.	Max.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Max.	Note 1	Note 2
DC - 1	0.10	0.15	100	85	1.05	1.10					
1 - 8	0.10	0.25	90	75	1.15	1.20				0.1	1.0
8 - 12	0.20	0.36	86	70	1.15	1.30	175	215	10		
12 - 18	0.25	0.45	76	60	1.15	1.30					

### Additional Specifications

Operating Voltage Range	24V (nom) ±1V
Switching Time (Typ.)	20ms
Life <sup>3</sup> (Min.)	1 year/10 million switch cycles

#### Notes

- To achieve specified life, hot switching RF power must not exceed this level.
- Degradation in life (min.) to typically 3 million switch cycles for hot switch at this RF power level.
- Tested at 0 dBm RF power.

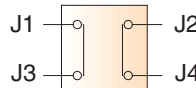
**10 YEAR EXTENDED WARRANTY**

10 Yr. 100 Million Cycles\*  
\$19.95/yr.  
for a total of \$199.50

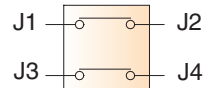
\*10 year agreement required  
[Click Here for details](#)

### Switching States

DE-ENERGIZED DC=0V

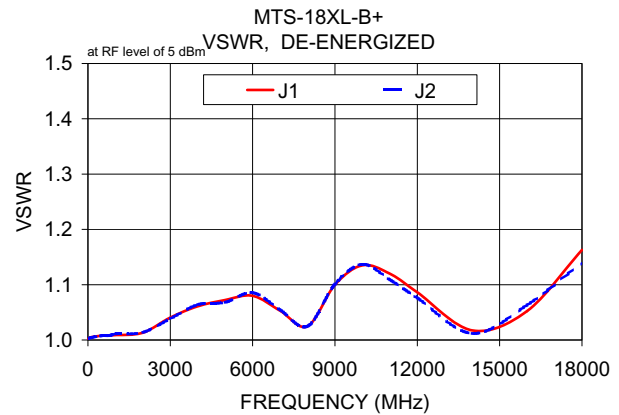
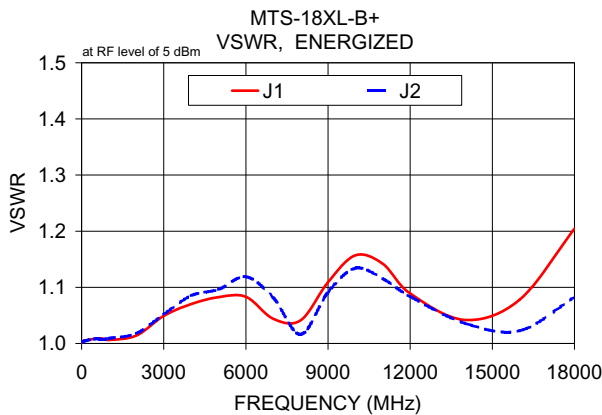
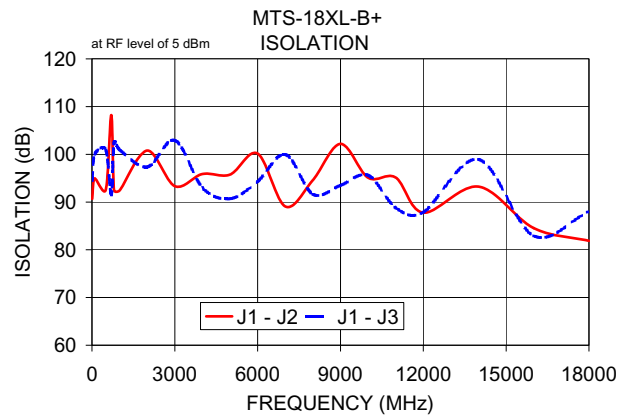
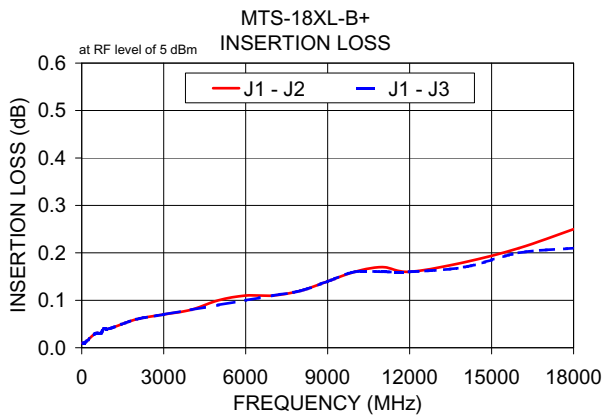


ENERGIZED DC=24V



## Typical Performance Data

FREQ. (MHz)	ON INSERTION LOSS (dB)		OFF ISOLATION (dB)		VSWR energized (:1)		VSWR de-energized (:1)	
	J1-J2	J1-J3	J1-J2	J1-J3	J1	J2	J1	J2
10.00	0.01	0.01	90.66	94.50	1.00	1.00	1.00	1.00
100.00	0.01	0.01	94.93	100.05	1.00	1.00	1.00	1.00
500.00	0.03	0.03	92.59	100.93	1.01	1.01	1.01	1.01
700.00	0.03	0.03	108.21	91.48	1.01	1.01	1.01	1.01
800.00	0.04	0.04	92.52	102.45	1.01	1.01	1.01	1.01
1000.00	0.04	0.04	92.45	100.96	1.01	1.01	1.01	1.01
2000.00	0.06	0.06	100.79	97.34	1.01	1.02	1.01	1.01
3000.00	0.07	0.07	93.32	102.92	1.05	1.05	1.04	1.04
4000.00	0.08	0.08	95.89	93.03	1.07	1.09	1.06	1.06
5000.00	0.10	0.09	95.75	90.70	1.08	1.10	1.07	1.07
6000.00	0.11	0.10	100.15	94.32	1.08	1.12	1.08	1.09
7000.00	0.11	0.11	89.08	99.96	1.04	1.08	1.05	1.05
8000.00	0.12	0.12	94.59	91.64	1.04	1.02	1.02	1.02
9000.00	0.14	0.14	102.19	93.50	1.11	1.09	1.10	1.10
10000.00	0.16	0.16	95.10	95.63	1.16	1.13	1.14	1.14
11000.00	0.17	0.16	95.14	88.79	1.14	1.12	1.12	1.11
12000.00	0.16	0.16	87.77	87.85	1.09	1.08	1.09	1.08
14000.00	0.18	0.17	93.24	98.95	1.04	1.04	1.02	1.01
16000.00	0.21	0.20	84.54	82.94	1.08	1.02	1.05	1.06
18000.00	0.25	0.21	81.87	88.03	1.20	1.08	1.16	1.14



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