Xtra Long Life

SPDT Switch

50Ω DC to 18 GHz 24 Volt

MSP2TA-18XL+
MSP2TA-18-PM+
MSP2TA-18-BM+

MSP2TA-18XL+

MSP2TA-18-PM+
Panel Mount

MSP2TA-18-BM+
Base Mount

HT-Series Tight Spot SMA Wrench From $24.95
Click Here

Features

- low insertion loss, 0.2 dB typ.
- high isolation, 85 dB typ.
- high power handling, 10W
- ultra reliable
- break-before-make configuration
- absorptive failsafe 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

Model No.	Connectors	Bracket Option	Case Style	Price	Qty.
MSP2TA-18XL+	SMA	—	FP914	$189.95	(1-9)
MSP2TA-18-PM+	SMA	Panel Mount	FP914-PM	$192.95	(1-9)
MSP2TA-18-BM+	SMA	Base Mount	FP914-BM	$192.95	(1-9)

See Page 2 for Mounting Options Available
Option must be specified when ordering

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

Parameter	Condition	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	18	GHz
Insertion Loss	DC - 1 GHz	—	0.10	0.15	dB
	1 - 8	—	0.15	0.30	
	8 - 12	—	0.25	0.40	
	12 - 18	—	0.30	0.50	
Isolation	DC - 1 GHz	85	100	—	dB
	1 - 8	75	90	—	
	8 - 12	70	80	—	
	12 - 18	60	66	—	
VSWR	DC - 1 GHz	—	1.05	1.10	:1
	1 - 8	—	1.20	1.30	
	8 - 12	—	1.20	1.35	
	12 - 18	—	1.15	1.40	
DC Current	at 24V	—	175	215	mA
RF Power Cold Switching[4]		—	—	10	W
RF Power Hot Switching	Note 1	—	—	0.1	W
	Note 2	—	—	1.0	

Additional Specifications	
Operating Voltage Range	24V (nom) ±1V
Switching Time (Typ.)	20ms
Life[3] (Min.)	1year/10 million cycles

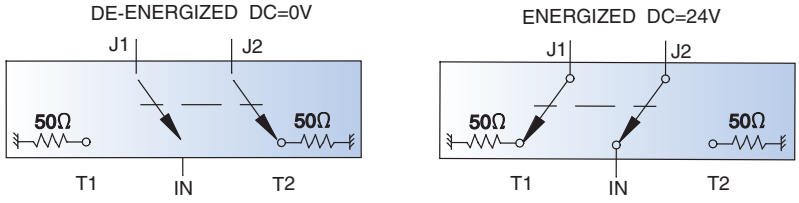
Notes
1. To achieve specified life, hot switching RF power must not exceed this level.
2. Degradation in life (min.) to typically 3 million switch cycles for hot switch at this RF power level.
3. Tested at 0 dBm RF power.
4. Power handling is specified with RF applied to the IN port and output load connected to either J1 or J2.

Maximum Ratings

Operating Temperature	-15°C to +45°C
Storage Temperature	-15°C to +85°C
RF Power (at IN port)	10W
RF Power (at J1 and J2)	1W
Control Voltage	26VDC

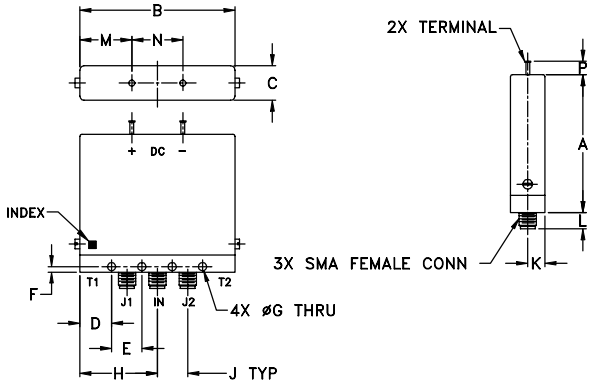
Permanent damage may occur if any of these limits are exceeded.

Switching States



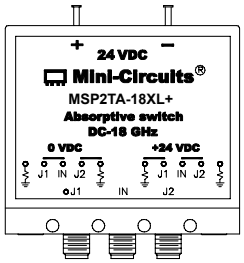
MSP2TA-18XL+
MSP2TA-18-PM+
MSP2TA-18-BM+

Outline Drawing (FP914)



Marking Drawing

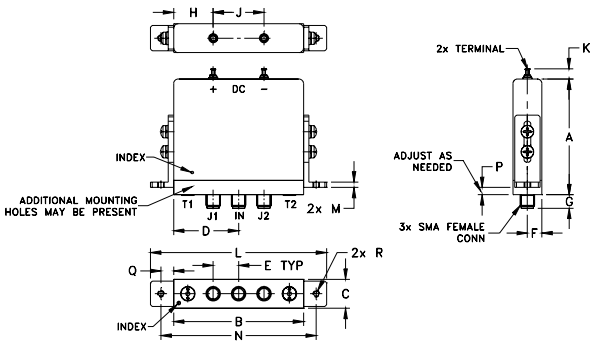
MSP2TA-18XL+



Outline Dimensions (inch / mm)

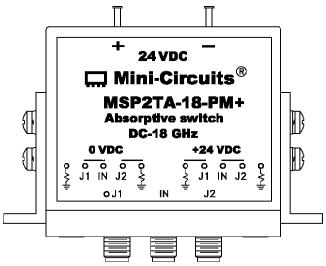
A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
2.00	2.25	.50	.460	.440	.080	.120	1.125	.440	.25	.24	.755	.740	.19	grams
50.80	57.15	12.70	11.68	11.18	2.03	3.05	28.58	11.18	6.35	6.10	19.18	18.80	4.83	93.1

Outline Drawing (FP914-PM) *Panel Mount Bracket*



Marking Drawing

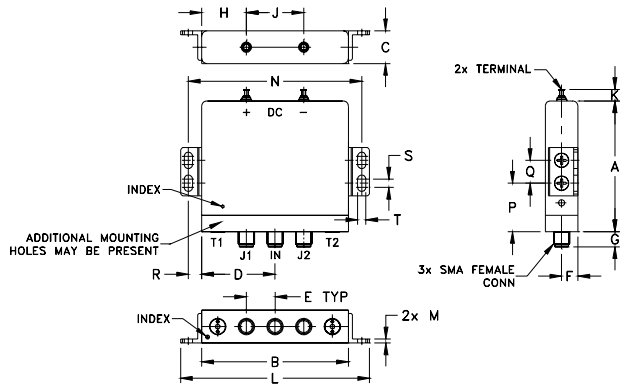
MSP2TA-18-PM+
Panel Mount Option



Outline Dimensions (inch / mm)

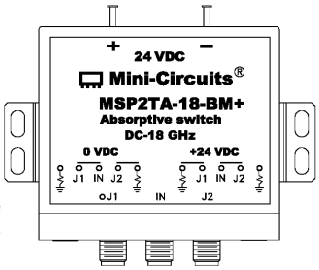
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	wt
2.00	2.25	.50	1.125	.440	.25	.24	.755	.740	.19	3.05	.094	2.69	0 MIN/.25 MAX	.22	#4-40	grams
50.80	57.15	12.70	28.58	11.18	6.35	6.10	19.18	18.80	4.83	77.47	2.39	68.33	0 MIN/6.35 MAX	5.59	--	102

Outline Drawing (FP914-BM) *Base Mount Bracket*



Marking Drawing

MSP2TA-18-BM+
Base Mount Option

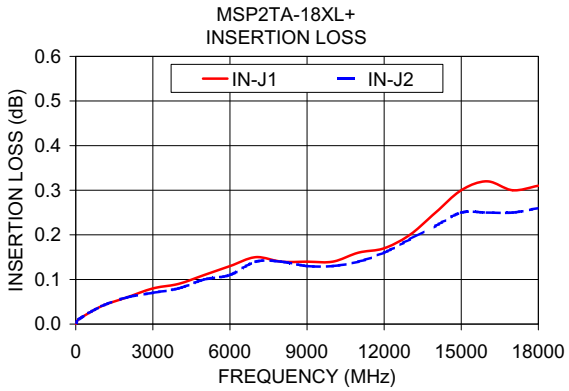


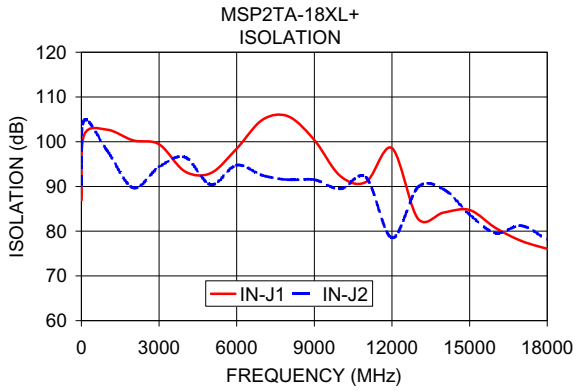
Outline Dimensions (inch / mm)

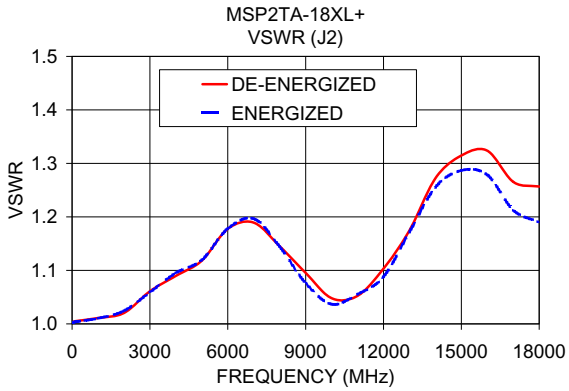
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt
2.00	2.25	.50	1.125	.440	.25	.24	.755	.740	.19	2.90	.062	2.660	.19	.350	.205	.125	.125	grams
50.80	57.15	12.70	28.58	11.18	6.35	6.10	19.18	18.80	4.83	73.66	1.57	67.56	4.83	8.89	5.21	3.18	3.18	96.6

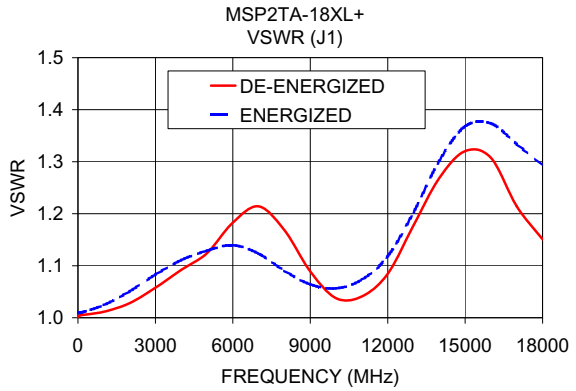
Typical Performance Data

FREQ. (MHz)	ON INSERTION LOSS (dB)		OFF ISOLATION (dB)		VSWR, IN (:1)		VSWR, (J2) (:1)		VSWR (J1) (:1)	
	IN-J2	IN-J2	IN-J1	IN-J2	De-Energized	Energized	De-Energized	Energized	De-Energized	Energized
10.00	0.00	0.00	86.92	90.23	1.00	1.00	1.00	1.00	1.00	1.01
100.00	0.01	0.01	101.44	104.72	1.00	1.01	1.00	1.00	1.00	1.01
1000.00	0.04	0.04	102.68	97.93	1.01	1.01	1.01	1.01	1.01	1.02
2000.00	0.06	0.06	100.29	89.71	1.02	1.03	1.02	1.02	1.03	1.05
3000.00	0.08	0.07	99.44	94.36	1.06	1.06	1.06	1.06	1.06	1.08
4000.00	0.09	0.08	93.35	96.55	1.09	1.09	1.09	1.10	1.09	1.11
5000.00	0.11	0.10	92.98	90.42	1.12	1.13	1.12	1.12	1.12	1.13
6000.00	0.13	0.11	98.44	94.76	1.16	1.18	1.18	1.18	1.18	1.14
7000.00	0.15	0.14	104.93	92.46	1.18	1.21	1.19	1.20	1.21	1.12
8000.00	0.14	0.14	105.64	91.48	1.14	1.17	1.15	1.14	1.17	1.09
9000.00	0.14	0.13	100.36	91.51	1.09	1.09	1.10	1.08	1.09	1.06
10000.00	0.14	0.13	92.35	89.45	1.04	1.04	1.05	1.04	1.04	1.06
11000.00	0.16	0.14	91.02	91.97	1.04	1.04	1.05	1.06	1.04	1.07
12000.00	0.17	0.16	98.57	78.50	1.10	1.08	1.10	1.09	1.08	1.12
13000.00	0.20	0.19	82.82	89.80	1.19	1.17	1.17	1.17	1.18	1.20
14000.00	0.25	0.22	84.16	89.36	1.27	1.26	1.27	1.26	1.27	1.30
15000.00	0.30	0.25	84.72	83.73	1.32	1.32	1.31	1.29	1.32	1.37
16000.00	0.32	0.25	80.73	79.61	1.31	1.32	1.32	1.28	1.31	1.37
17000.00	0.30	0.25	77.82	81.23	1.30	1.23	1.27	1.21	1.21	1.33
18000.00	0.31	0.26	76.06	78.10	1.27	1.17	1.26	1.19	1.15	1.29









Additional Notes

A. 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.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

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