

## SP3T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA

The FMSW6362 is a Single Pole Three Throw (SP3T) electromechanical relay switch that operates across a wide frequency range of DC to 18 GHz and can handle up to 90 Watts of CW input power in a break before make condition. The design features a Latching actuator and is rated for 5M life cycles for high reliability operation. Impressive performance includes insertion loss less than 0.15 dB typical and isolation greater than 80 dB typical. The Latching actuator has a +28 Vdc bias voltage, and operates over a temperature range of -25°C to +70°C. The rugged and compact package assembly supports SMA Female connectors and a 15 Pin D-Sub Connector for DC Control. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

### Electrical Specifications

Switch Type	SP3T
Actuator Type	Latching
Switching Sequence	Break before Make

Description	Min	Typ	Max	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts		90		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.15	0.4	dB
Insertion Loss Repeatability				
Isolation	80	80		dB
Input Power (CW)			60	Watts
Switching Time			20	ms

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12	12 - 18			GHz
VSWR, Max	1.2:1	1.3:1	1.4:1			
Insertion Loss, Max	0.15	0.25	0.4			dB
Isolation, Min	80	80	80			dB
Power In, Typ (CW)	90	75	60			Watts

### Mechanical Specifications

#### Size

Weight	0.353 lbs [160.12 g]
Package Type	Connectorized
Operating Life	5,000,000 Cycles

#### Connectors

RF Connector Type	SMA Female
Control Connector	15 Pin D-Sub



### Features:

- Single Pole Three Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 80 dB typical
- 5M Cycle Min Operating Life
- +28 Volt DC
- 90 Watt average Power
- Latching Actuator
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.15 dB Max
- VSWR as low as 1.2:1 max
- SMA Female RF connectors
- 15 Pin D-Sub Connector for DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

### Applications:

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

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## Environmental Specifications

### Temperature

Operating Range -25 to +70 deg C  
Storage Range -55 to +100 deg C

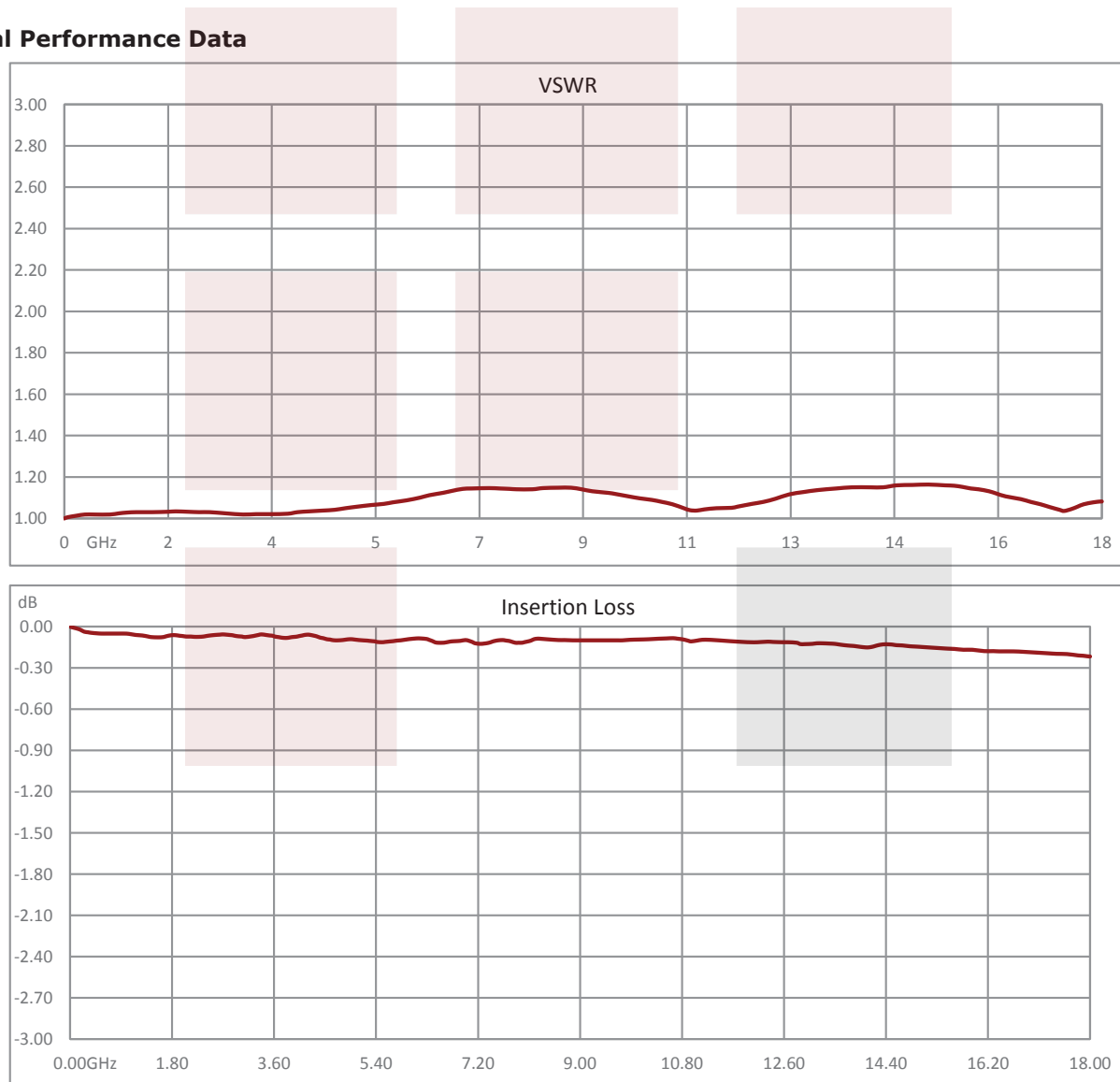
Shock MIL-STD-202 Method 213, Cond. D 500G Non Operating  
Vibration MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

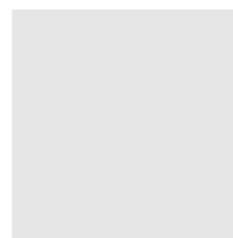
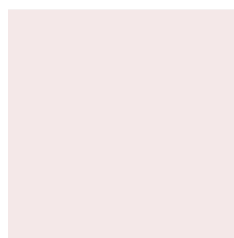
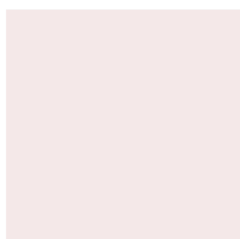
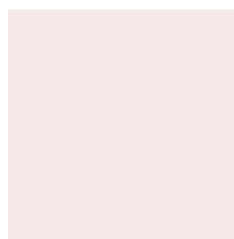
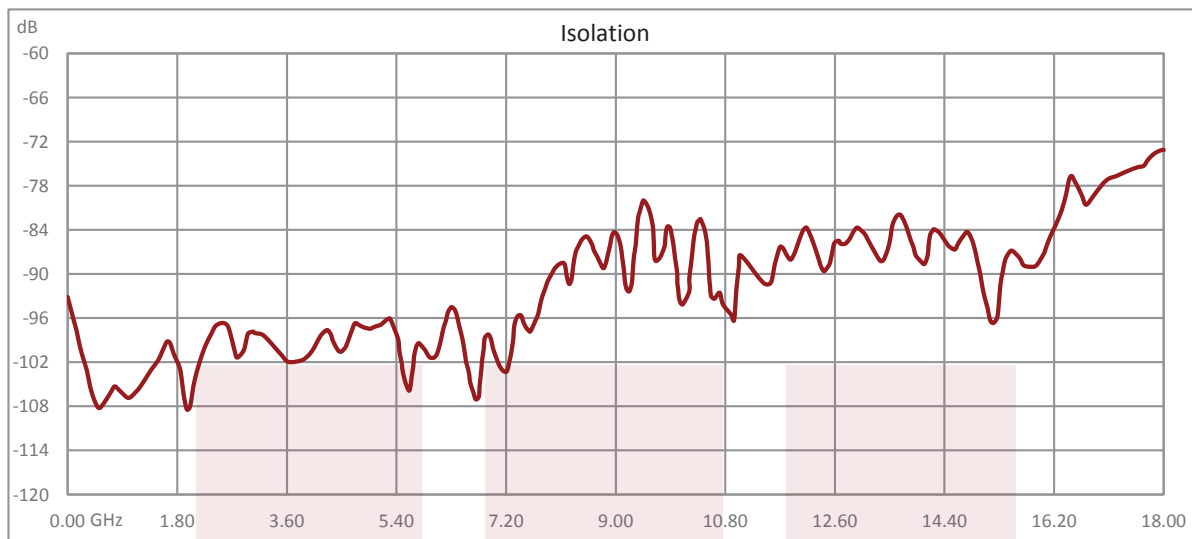
## Compliance Certifications (see [product page](#) for current document)

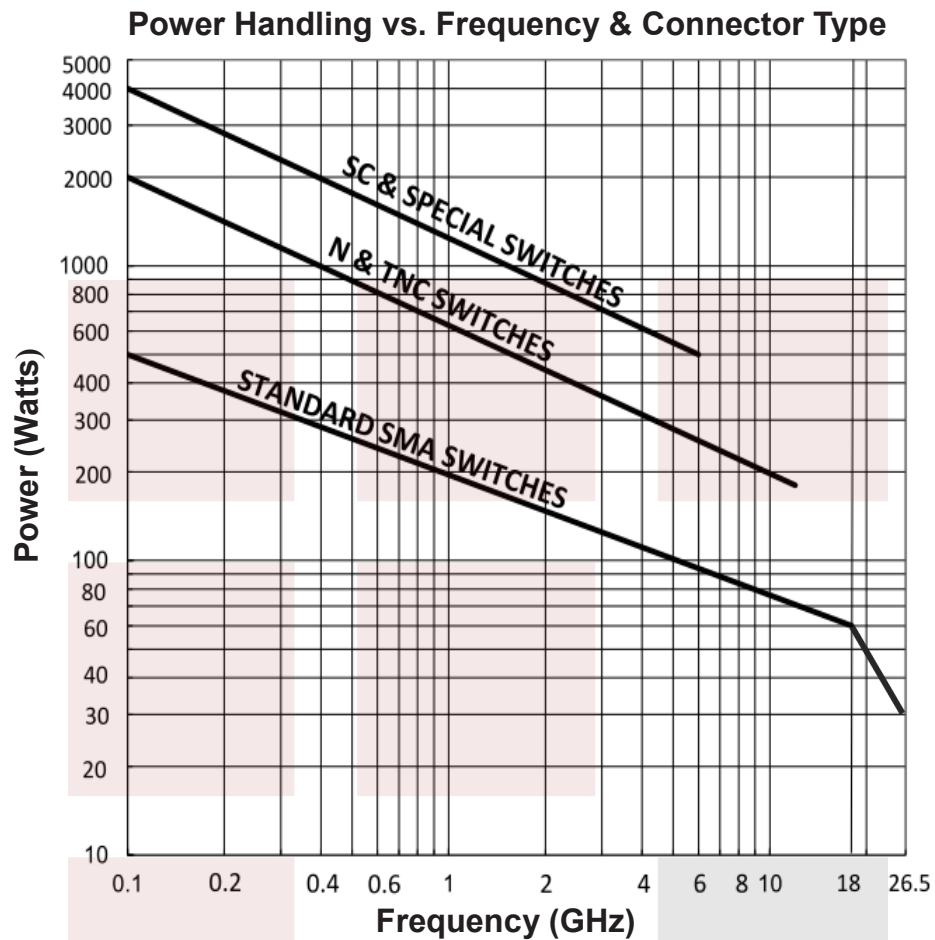
## Plotted and Other Data

Notes:

### Typical Performance Data







**Environmental and Test Conditions:**

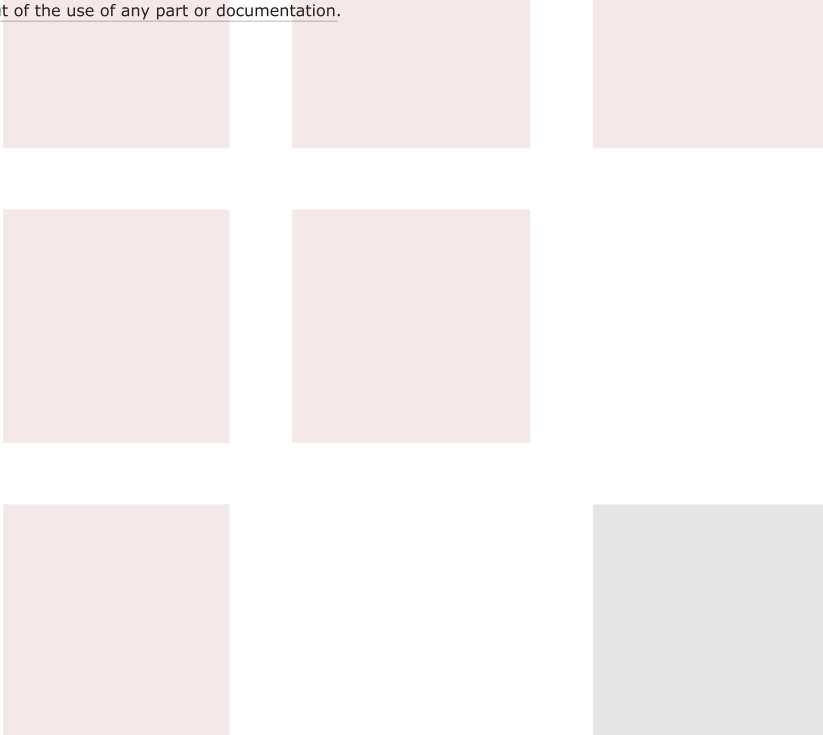
- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

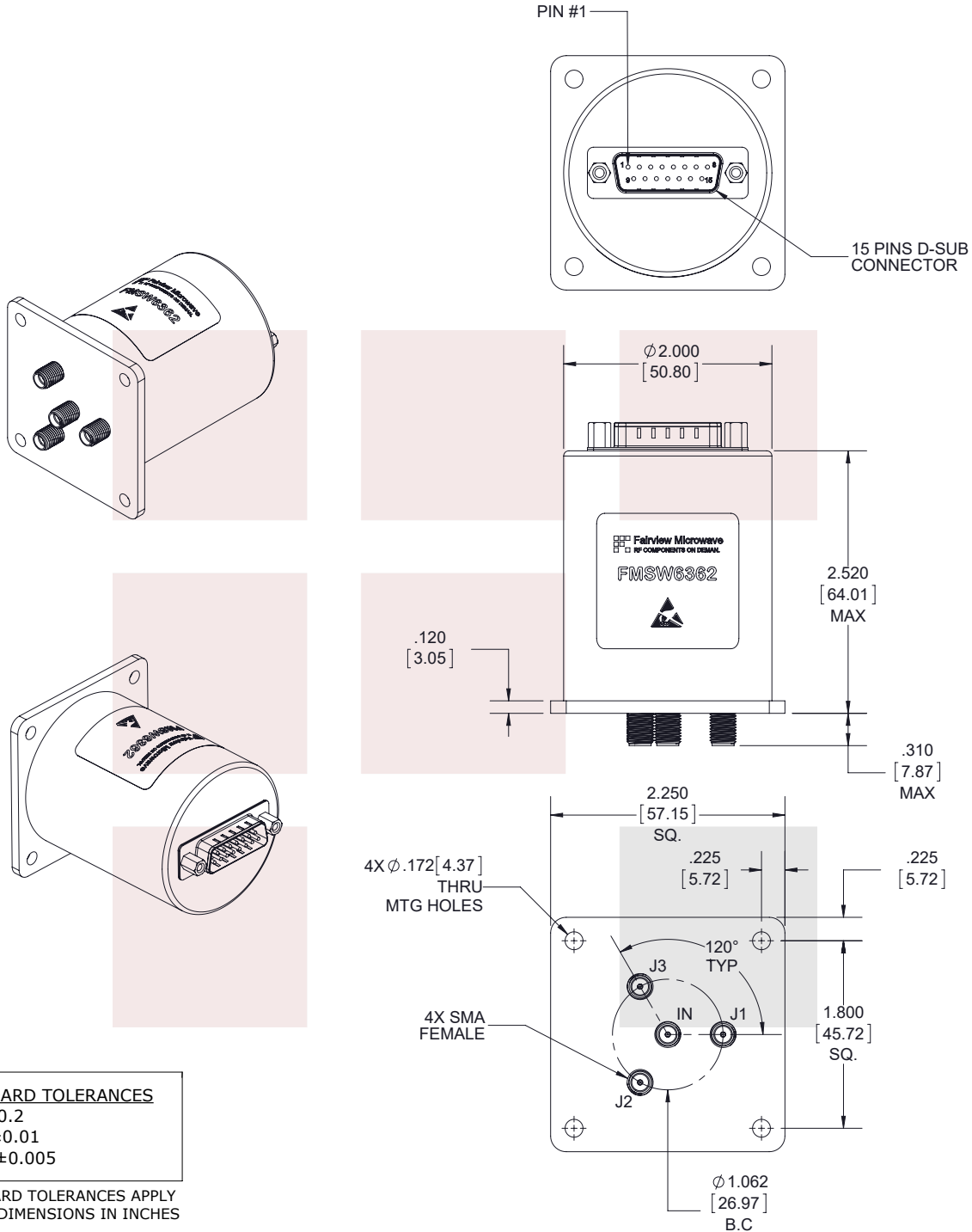
SP3T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SP3T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA FMSW6362](#)

URL: <https://www.fairviewmicrowave.com/sp3t-latching-18-ghz-electro-mechanical-relay-switch-60w-28v-sma-fm-sw6362-p.aspx>

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## FAIRVIEW MICROWAVE INC.

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### TITLE

SP3T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA

### NOTES:

1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

### DWG NO

FMSW6362

### CAGE CODE

3FKR5

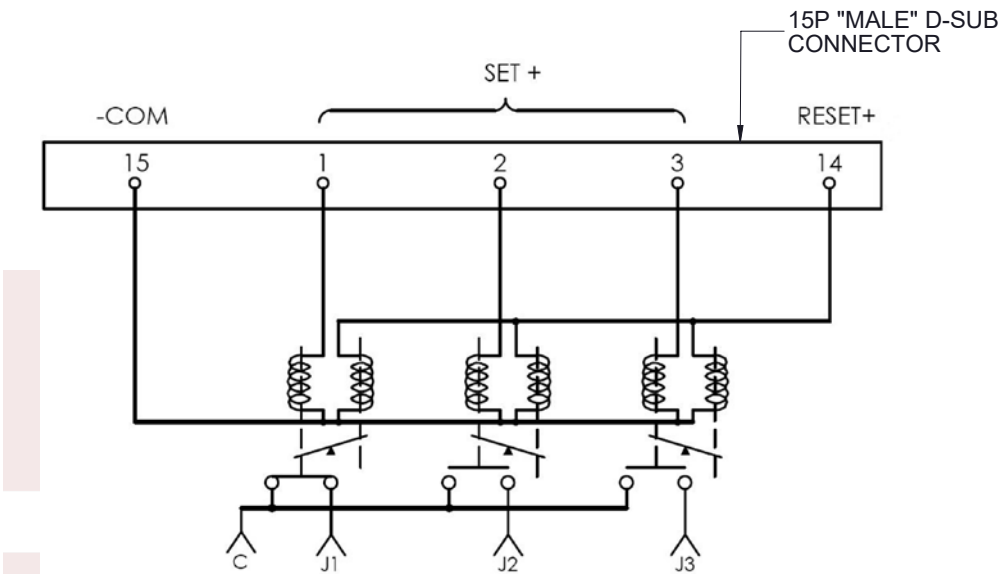
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SHEET 1 OF 2

SCALE N/A

SIZE A

7361



SCHEMATIC SHOWN IN LATCHING POSITION  
(COIL 1 SHOWN LAST ENERGIZED)

TERMINALS D-SUB PIN ASSIGNMENT	RF PATH		
	J1	J2	J3
1 (SET+)	ON	OFF	OFF
2 (SET+)	OFF	ON	OFF
3 (SET+)	OFF	OFF	ON
14 (RESET+)	ALL OFF		

PIN 15. -COM

STANDARD TOLERANCES  
.X ±0.2  
.XX ±0.01  
.XXX ±0.005

\*STANDARD TOLERANCES APPLY  
ONLY TO DIMENSIONS IN INCHES

FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].			
TITLE SP3T Latching DC to 18 GHz Electro-Mechanical Relay Switch, up to 90W, 28V, SMA	DWG NO FMSW6362		CAGE CODE 3FKR5		
	CAD FILE 091117	SHEET 2 OF 2	SCALE N/A	SIZE A	7361