

**DESCRIPTION**

Microsemi – Lowell’s switch modules provide an economical way of achieving a switch function from UHF through Ku band. These switch modules provide broadband, high performance characteristics in a small package. Our catalog parts are basic examples of our capability. We will be glad to explore your specific requirements with the goal of providing custom parts for your needs.

This series of modules meets RoHS requirements per EU Directive 2002/95/EC. The standard terminal finish is gold unless otherwise specified. Consult the factory if you have special requirements.

**IMPORTANT:** For the most current data, consult MICROSEMI’s website: [www.MICROSEMI.com](http://www.MICROSEMI.com)



These devices are ESD sensitive and must be handled using ESD precautions.

**ABSOLUTE MAXIMUM RATINGS AT 25° C  
(UNLESS OTHERWISE SPECIFIED)**

Rating	Symbol	Value	Unit
Storage Temperature	T <sub>STG</sub>	-55 to +125	°C
Operating Temperature	T <sub>OP</sub>	-55 to +95	°C
RF CW Power Handling	P <sub>CW</sub>	0.5	W

**KEY FEATURES**

- Multi Octave Frequency Ranges
- Hermetically Sealed
- Microstrip/Stripline Compatible
- Consistent VSWR
- Internal TTL Driver
- RoHS Compliant

**APPLICATIONS/BENEFITS**

- Drop in Module
- Broadband (0.5 – 18 GHz)

**GUARANTEED ELECTRICAL PARAMETERS @ 25°C (unless otherwise specified)**

Model Number	Frequency Range	Insertion Loss <sup>1</sup> (dB) (Max)	Isolation(dB) (Min)	VSWR (Max)	SWITCHING SPEED <sup>2</sup> (uS)	
					T <sub>RISE</sub> (Max)	T <sub>FALL</sub> (Max)
GG72220-01	0.5 - 4.0	1.7	60	1.7:1	1.0	1.0
GG72220-02	2.0 - 8.0	2.1	55	1.7:1	1.0	1.0
GG72220-03	4.0 - 12.4	2.4	50	1.8:1	1.0	1.0
GG72220-04	8.0 - 18.0	2.9	40	1.9:1	1.0	1.0
GG72220-05	2.0 - 18.0	2.9	40	2.0:1	1.0	1.0

Notes:

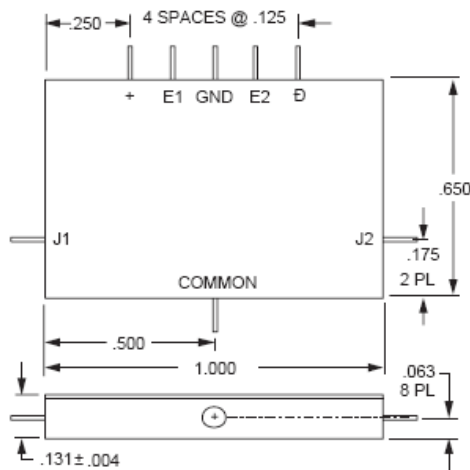
1. RF Power Handling; .5W CW.
2. Switching Speed: 1.0µS (max).
3. Required D.C. Bias: +5v @ +75mA (max) and -8 to -15v @ -50mA (max)
4. Switching Speed is measured from the 50% point of the TTL pulse to the 90%-10% of the detected RF pulse with a 100 kHz maximum switching rate.
5. Temperature Rating: Operating, -55 to +95°C; Storage, -55 to =125°C.
6. Only the switched arms, J1 & J2 are matched in the isolated state. The common arm is matched only when one path is in the loss state.

**ENVIRONMENTAL**

These units are designed to withstand the following environmental conditions without damage.

**ENVIRONMENTAL CONDITIONS**

TEST	MIL-PRF	METHOD	CONDITION
Internal Visual	883	2017	--
Stabilization Bake	883	1008	B
Thermal Cycle	883	1010	B
Constant	883	2001	1 (Y1 Axis)
Seal – Fine Leak	883	1014	A1
Seal – Gross Leak	883	1014	C1
External Visual	883	2009	--

**OUTLINE 210015**

**NOTES**

1. All pins are 0.012 ± 0.001" dia, 0.100" (min) long. May be supplied with tabs, 0.025 ± 0.01 x 0.006 ± 0.002, upon request.
2. Tolerance on 3 place decimal, ± 0.003" unless otherwise specified.
3. Case and leads gold plated per MIL-G-45204, Type 3, Grade A 50 pinch (min).

**Truth Table**

E1	E2	Comm - J1	Comm - J2
0	1	Loss	Isolation
1	0	Isolation	Loss