

M0738BP15 700 –3800 MHz / 15 Watts

The M0738BP15 is suitable for broadband mobile Jamming and band specific high power linear applications in the P/L/S frequency bands. This compact module utilizes high power advanced GaN devices that provide excellent power density, high efficiency, wide dynamic range and low distortions. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, machined housings and qualified components. Sungsan's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

- Solid-state linear design
- Instantaneous ultra broadband
- Small and lightweight
- Suitable for most modulation types
- 50 ohm input/output impedance
- High reliability and ruggedness
- Built-in control, monitoring and protection circuits

ELECTRICAL SPECIFICATIONS @ +28 VDC, 25°C, 50 Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	700		3800	MHz
Power Output CW	P _{SAT}	15			Watt
Output Power @ 1 dB Gain Compression Point	P _{1dB}		6		Watt
Small Signal Gain	G _{SS}	42		48	dB
Input Power for Rated Pout	P _{IN}		0		dBm
Gain Flatness @ rated output power	ΔG _P		±1.0	±1.5	dB
Input Return Loss	S ₁₁			-10	dB
Noise Figure	NF			10	dB
Third Order Intercept Point 2-Tones @ 30 dBm/Tone, Δ = 0.1 MHz	IP3		+40		dBm
Harmonics @ P _{1dB}	H		-25	-15	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	V _{DC}	26	28	30	Volt
Current Consumption @ rated Pout	I _{DD}			3.0	Amp
Standby Current Consumption	I _{DQ}		100		mA
Switching Time, 1 KHz TTL, P _{IN} = 0 dBm	T _{ON} /T _{OFF}		1.0	5.0	uSec

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit	Limits
Operating Case Temperature	T _c	-20		+75	°C	
Storage Temperature	T _{stg}	-40		+85	°C	
Relative humidity (non-condensing)	RH			95	%	
Altitude (MIL-STD-810F Method 500.4)	ALT		30,000		Feet	
Vibration	VI	MIL-STD-810F Method 514.5 Proc I random sinusoidal Category 4 or 9 or 13				
Shock	SH	MIL-STD-810F Method 516.4 Proc I Operational: Acceleration (A) of 20.0 g ±1.5 g with Duration of 11.0 ms ±1.0 ms shock pulse. Non-Operational: Impact shocks of 25 g ±3.0 g with Duration of 11.0 ms ±1.0 ms shock pulse.				

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LIMITS

Parameter	Value	Limits
Input RF drive level without damage	+10dBm	Max
Load VSWR @ Pout = 20W	∞ @ all load phase & amplitude	Nom
Thermal Overload	Graceful degradation	Max

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	6.0 x 3.0 x 1.0	Inch	Max
Weight	1.0	lb.	Max
RF Connectors In/Out	SMA female		
DC / Control Connector	Dsub, 9-Pins, Male		
Cooling	External Heatsink		

DC CONNECTOR- D-Sub, 9Pin, Male

Pin #	Description	Specifications
1	N/C	Reserved
2	Current Monitor	Analog voltage relative to ID @ 100 mV/100 mA
3	Temperature Sense	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	N/C	Reserved
5	Shutdown	Amplifier Enable: TTL "Low" (Logic 0) or "Open" Amplifier Disable: TTL "High" (Logic 1)
6	VDD	+28 VDC \pm 2 VDC
7	VDD	+28 VDC \pm 2 VDC
8	GND	Ground
9	GND	Ground

OUTLINE DRAWING

