

GPSRKL1M Military Mobile L1 Repeater

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Technical Product Data

Features

- **Military Style Connector**
- **Integrated Antenna**
- **Waterproof**
- **Mil Spec 1275B Power Supply**
- **Optional EMI Sealed**



Description

The GPSRKL1M is a GPS L1 repeater system designed specifically for rugged, mobile military environments. The product features a military style cannon plug connector for DC power, and comes with a waterproof enclosure with the option to EMI proof the enclosure as well. The GPSRKL1M also features custom gain options to ensure a radiated power level that covers only the required area.

Repeater Amplifier:

Electrical Specifications, Operating Temperature -40 to 85°C

Parameter	Conditions	Min	Typ	Max	Units
Passband	IN Port – Tx Ant	1565	1575	1585	MHz
Input Imped.	IN Port		50		Ω
Gain -Standard -Custom	IN Port – Tx Ant	14	15	16	dB
		-0.5	TBD ⁽¹⁾	+0.5	
Input SWR	Input Port 50Ω			2.0:1	-
Noise Figure	IN Port – Tx Ant			1.8	dB
DC IN	DC Input on Military Connector:	11.5		35 ⁽²⁾	VDC VDC
	Optional DC input on In Port:	3		16	
Current	Amplifier Current Draw, DC Input			14	mA
Current (Iout)	Antenna Current Draw, DC output to Ant ⁽³⁾ VDC In = 28V,			60	mA

Notes:

1. Gain may be specified by customer, 3 to 28dB.
2. Maximum DC IN is 35V when 1275B Powered option is included.
3. Maximum combined DC current draw out all ports of the device is a function of the DC input voltage and desired DC output voltage , according to the following:

$$I_{out} \leq 1.4 / (V_{DC IN} - V_{DC OUT}) - 0.016 \quad \text{Amps}$$

Repeater Antenna:

Electrical Specifications, Operating Temperature -40 to 85°C

Parameter	Conditions	Min	Typ	Max	Units
Frequency			1575		MHz
Bandwidth	Ant		20		MHz
Gain	Ant		3		dBiC
Polarization			RHCP		

Available Options:

Power Supply Options:		
Source Voltage Options	Voltage Input	Type
	DC 11.5-35 VDC	Military Style Connector
	DC 3-16 VDC	DC Input on IN Port
Output Voltage Options	DC Voltage Out⁽¹⁾	
	3.3 (DC IN min = 11.5V)	
	5 (DC IN min = 12.5V)	
	7.5 (DC IN min = 15V)	
	9 (DC IN min = 16.5V)	
	Custom	
RF Connector Options:		
IN Port Connector Options	Connector Type	Limitations
	N (Male & Female)	
	SMA (Male & Female)	
	TNC (Male & Female)	
	BNC (Male & Female)	Performance Not Guaranteed

Notes:

1. Maximum DC current draw out input port of the device is a function of the DC input voltage and desired DC output voltage , according to the following:

$$I_{out} \leq 1.4 / (V_{DC IN} - V_{DC OUT}) - 0.016 \quad \text{Amps (or 250mA max)}$$

Recommended Receive Antenna

GPS Source recommends operation of the GPSRKL1M with the GPS Source PN L13GA-XX Active GPS antenna.





Part Number:

GPSRKL1M – AXX – PM / 5 – SF

Product:

Mil. Spec. GPSPK
(Pass DC J1 for Ant.)

Gain Option:

AXX – Amplifier Gain Setting

Source Voltage:

PM – Military Connector (User supplies DC)

Output Voltage:

3.3, 5, 7.5, 9 – Denotes Voltage
(XX – custom output voltage, V – variable)

Connector Options:

- NM** – N, Male
- NF** – N, Female
- SM** – SMA, Male
- SF** – SMA, Female
- TM** – TNC, Male
- TF** – TNC, Female
- BM** – BNC, Male
- BF** – BNC, Female

Mechanical:

Standard Housing:

