

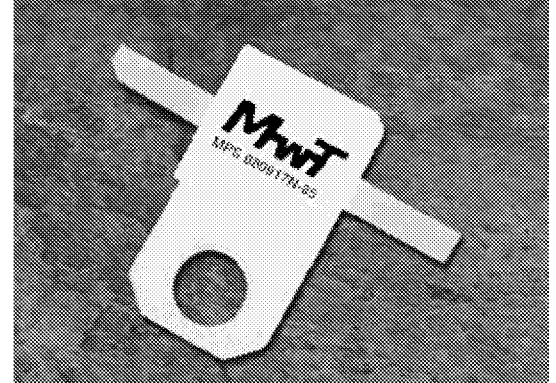


# MPS-080917N-85

## 870 to 925 MHz Low Noise Receiver Amplifier

### Features

- Very Low Noise 0.8 dB Typical
- High +36 dBm Typical IP3
- 13.5 dB Typical Gain
- 7.5 Volt Bias
- 26% High Power Added Efficiency



PRELIMINARY

### Description

The MPS-080917N-85 is a low noise, high dynamic range amplifier designed for ultra linear GSM, NMT-900 and ETACS receiver applications. The circuit is matched to 50  $\Omega$  and employs a single stage GaAs FET with internal matching to provide exceptional noise figure, 0.8 dB combined with extremely high IP3, +36 dBm. Typical applications are base station receivers, Tower mounted LNA's, smart antenna systems picocell repeaters and receiver multi-couplers.

### Electrical Specifications at 25°C, V<sub>dd</sub> = 7.5 V, Z<sub>o</sub> = 50 $\Omega$

Symbol	Parameter	Minimum	Typical	Maximum	Unit
Freq	Frequency Range	870		925	MHz
SSG	Small Signal Gain	12	13.5		dB
P1dB	Pout at 1 dB Compression		+23		dBm
IP3	Third-order Intercept <sup>1</sup>	+33.0	+36.0		dBm
NF	Noise Figure		0.8	1.0	dB
VSWR	Input VSWR		2.0:1	2.5:1	
$\Delta$ GOF	Gain Variation over Frequency		$\pm 0.2$	$\pm 0.5$	dB
$\Delta$ GOT	Gain Variation over Temperature		-0.15		dB/°C
I <sub>dd</sub>	DC Current		180	250	mA
PAE	Power Added Efficiency		26		%

<sup>1</sup> Two tone test at +5 dBm per output tone.

### Absolute Maximum Ratings

Maximum Bias Voltage	8.0 V
Maximum Continuous RF Input Power	950 mW
Maximum Peak Input Power	1400 mW
Maximum Case Operating Temperature	+85°C
Maximum Storage Temperature	-65°C to +150°C

### Ordering Information

Part Number	Package
MPS-080917N-85	Half Flange Package
MPS-080917N-85EV	Half Flange Package on Evaluation Board

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