

**WIRELESS INFRASTRUCTURE AND COMPONENT TESTING**  
COMMERCIAL, MILITARY AND GOVERNMENT NETWORKS

*Critical technologies and capabilities required for this application*

Empower has fielded a number of “best in class” power amplifier solutions for high performance requirements in tactical and agency-related communications applications. Our band specific, and multi-band building block solutions are designed for complex digital waveform transmissions in manpack, vehicular, and fixed site configurations, utilizing the latest in LDMOS and GaN device technology. The products highlighted in this document are characterized for specific modulations as shown, and also manage linearity and efficiency via the techniques listed - traditional power back off, analog pre-distortion, Doherty, and/or feed forward.

*How Empower is positioned to support these applications*

We are pleased to present this line up of band specific, communications amplifiers that are optimized for use in wireless communications and infrastructure applications. Systems designers will find more in-depth information regarding performance features and specification parameters in our published datasheets for these products.

Empower amplifiers are rugged and protected against high peak to average waveforms, over temperature, antenna mismatch, over current, input overdrive and over voltage fault conditions.

Empower provides various controls and modes of operation such as power level control, low energy usage in addition to RS232, TCP/IP, RS422 or other interfaces and features.

- ◆ 450 - 815 MHz
- ◆ 791 - 821 MHz
- ◆ 806 - 825 MHz
- ◆ 850 - 870 MHz
- ◆ 851 - 870 MHz
- ◆ 861 - 894 MHz
- ◆ 869 - 894 MHz
- ◆ 935 - 960 MHz
- ◆ 1805 - 1880 MHz
- ◆ 1930 - 1990 MHz
- ◆ 2110 - 2170 MHz
- ◆ 2620 - 2690 MHz

Individual datasheets can be accessed (by SKU number) on our homepage search engine - [www.empowerrf.com](http://www.empowerrf.com)

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### BAND SPECIFIC WIRELESS INFRASTRUCTURE MODULES

SKU	Start (MHz)	Stop (MHz)	Pout (Watt)	Gain (dB)	Size (Inch)	Modulation	Linearity Design Feature
7111	791	821	16	42	4.4 x 6.7 x 1.1	LTE	Doherty & Analog Pre-distortion
7113	806	825	10	40	4.3 x 7.9 x 1.4	TETRA	Feed Forward
7086	869	894	16	49	4.4 x 6.7 x 1.1	CDMA&WCDMA	Doherty & Analog Pre-distortion
7092	869	894	60	49	8.3 x 6.9 x 1.1	CDMA	Doherty & Analog Pre-distortion
7110	1805	1880	16	45	4.4 x 6.7 x 1.1	WCDMA&LTE	Doherty & Analog Pre-distortion
7082	1930	1990	16	49	4.4 x 6.7 x 1.1	CDMA&USPCS	Doherty & Analog Pre-distortion
7079	2110	2170	60	49	5.9 x 6.9 x 1.1	WCDMA	Doherty & Analog Pre-distortion
7085	2110	2170	30	49	5.1 x 6.7 x 1.2	WCDMA	Doherty & Analog Pre-distortion
7112	2620	2690	30	44	4.4 x 6.7 x 1.1	WCDMA&LTE	Doherty & Analog Pre-distortion

### COMPONENT TESTING SYSTEMS

SKU	Start (MHz)	Stop (MHz)	Pout (Watt)	Gain (dB)	Size
2192	20	1000	250	54	R3U
2125	105	3000	200	53	C19U
2193	1000	3000	100	49	R3U
2194	1000	3000	250	54	R3U
2135	300	3800	50	48	R3U
2153	700	3800	200	54	R3U
2010	2000	4000	50	46	R3U
2001	800	4200	15	42	B2U
2026	800	4200	25	44	R2U
2025	800	4200	50	46	R3U
2197	2000	6000	80	49	R3U
2195	2000	6000	120	51	R3U



#### Key Design Wins Capability Showcase Models 7079, 7083, 7085, 7092

These four models, covering wireless communications frequencies of interest are designed for single and multi-channel repeater applications and Distributed Amplifier Systems (DAS) in the frequency range of 1930-1990MHz, 2110-2170MHz and 869-894MHz.

These amplifiers utilize linear LDMOS power devices that provide high gain, wide dynamic range, low distortions, and excellent group delay and phase linearity. Exceptional performance, long term reliability, and high efficiency are achieved by employing Direct Injection Pre-DTM, advanced matching networks and combining techniques, EMI/RFI filters, machined housings, and qualified components. Empower RF's ISO9001 Quality Assurance Program ensures consistent performance and the highest reliability.

- ◆ Up to 40% efficiency on a WCDMA signal
- ◆ Advanced Doherty design for efficiency
- ◆ Analog pre-distortion design for linearity