

5G sub-6 GHz mobile FEMs using 8SW RF SOI

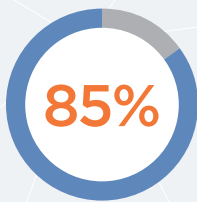
Differentiate with superior LNA and switch performance



The top three 5G sub-6 GHz FEM design companies are using GF 8SW*



8SW is the industry's first fully qualified high-volume RF SOI foundry solution manufactured on 300 mm wafers.



Approximately 85% of smartphones on the market today have GF solutions inside.†



Today we expect lightning-fast download speeds and reliable connectivity, available all the time and from everywhere, despite the escalating complexity our mobile devices must handle. With 5G now opening the door to richer experiences and more types of use cases, these expectations and challenges keep growing.

8SW from GlobalFoundries (GF®) delivers best-in-class switch and low-noise amplifier (LNA) performance for premium and high-tier 5G sub-6 GHz mobile front-end modules (FEMs). Leverage these benefits to take the mobile connectivity experience to new levels.

8SW at a glance

Platform	Key features
130 nm PD-SOI	<ul style="list-style-type: none"> • Exceptional noise figure & gain (LNA figure of merit > 200) • World class switch $R_{on} \cdot C_{off}$ • High linearity • Small digital footprint, low power (1.8 V/1.2 V SC library)



Stay connected:

8SW combines low insertion loss and high RF voltage/power-handling capabilities with best-in-class $R_{on} \cdot C_{off}$ and noise figure benefits for fewer dropped connections and to keep consumers texting, talking and sharing, from anywhere.



Enjoy crystal-clear calls:

With high gain, thick top level metals and all-copper interconnects, 8SW helps maximize signal strength so consumers can take reliable, high-quality connections for granted.



Go longer between charges:

8SW's industry-leading $R_{on} \cdot C_{off}$ and low-voltage standard cell libraries enable chip designers to minimize power consumption, which can help extend battery charges to days instead of hours.



Get the performance you need:

Leverage the 5G-optimized features that 8SW offers—and that industry visionaries are already using in today's leading smartphones—to take the user experience from ordinary to extraordinary.

LEARN MORE

GF knows RF. Learn how our extensive mobile solutions portfolio can help you extend your 5G leadership at globalfoundries.com/contact-us

Contact Us



5G cellular radio solutions from GF

Solution	Application	Benefits
45RFSOI	5G mmWave	Superior performance with high P_{sat} (up to 23 dBm) for premium smartphones
22FDX RF	5G mmWave	Superior performance with highest level of integration & high P_{sat} (up to 20 dBm) for premium smartphones
8SW RF SOI	5G sub-6 GHz	Outstanding performance for premium & high-tier smartphones
7SW RF SOI	4G LTE & 5G	Great performance for entry & mid-tier smartphones, smart watches & other connected mobile devices

* Based on revenue TAM.

‡ Based on independent teardown data. GF has RF content in the top 17 phone brands, which make up ~85% of the smartphone market.

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