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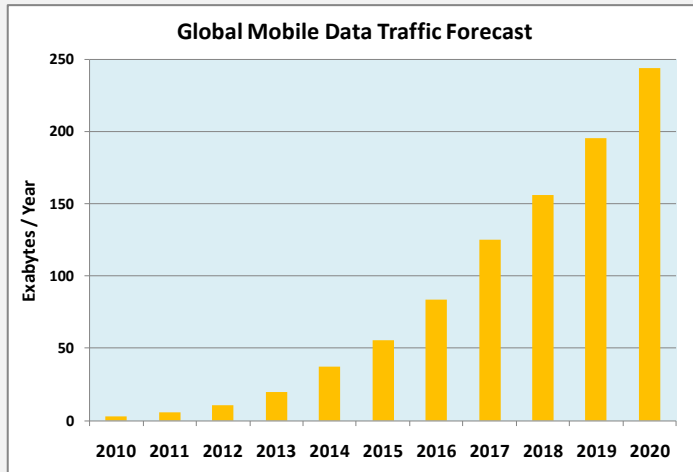
Freescale Introduces Airfast RF Power Solutions

Industry's Highest Reported Silicon Doherty Efficiency at 2.6GHz

Market Dynamics & Product Requirement Trends

Mobile Broadband: Needs of an evolving cellular market

- Enable increased **Capacity** requirements on cellular networks
- Support for 4G **Data Rates** and beyond
- Reduced **Energy** consumption
- Shrinking equipment **Footprint**
- Reduced **Time to Market** for new designs



Current Product Portfolio

- ▶ **RF Power**
 - Macro cells
- ▶ **Signal Bandwidth**
 - 20 – 35 MHz
- ▶ **RF Bandwidth**
 - Single Tx Band
- ▶ **RF PA Size and Cost**
 - Mix of single and 2 stage final stage device
 - Air cavity devices (above 1 GHz)
- ▶ **RF Performance**
 - Class AB and Symmetric Doherty
 - 30 – 40% Line Up Efficiency

Next Generation Solutions

- ▶ **RF Power**
 - Femto - Macro cells
- ▶ **Signal Bandwidth**
 - Support for Full Bands / All Frequencies
- ▶ **RF Bandwidth**
 - Single Tx band to Multi Tx band
 - Linearization and Filtering/out-of-band emissions considerations
- ▶ **RF PA Size and Cost**
 - Plastic packaging
 - Package uniformity over all Tx bands
 - Additional Integration
 - Reduction in board space
- ▶ **RF Performance**
 - Advanced High Efficiency PAs
 - 45%+ Line Up Efficiency (all bands)

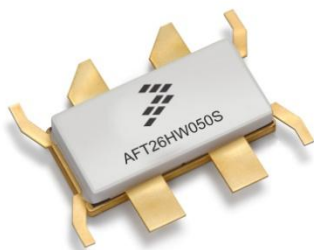


Market Need for Airfast 28V AFT26HW050S

- Designed specifically for wide instantaneous bandwidth micro / metro cell LTE applications between 2500 – 2700 MHz
- Seven points higher efficiency than previous LDMOS solutions and the highest silicon Doherty efficiency in the industry at this frequency
- Housed in a manufacturing-friendly, surface-mount air-cavity package enabling devices to be mounted on embedded coins or simple via arrays for thermal and electrical grounding
- Device is configured in a dual-path (Doherty compatible) configuration
- Dual-path concept offers size reduction by combining main and peaking into single package

Key Product Features

AFT26HW050S



50W Rated Power

Airfast RF Power Solutions 28V LDMOS

- Designed for cellular operation from 2500 MHz to 2700 MHz
- Dual-path device
- Ideal for in-package Doherty application
- Housed in NI780S-8 package

Key Product Features

AFT26HW050S



50W Rated Power

Airfast RF Power Solutions AFT26HW050GS

- 2620 - 2690 MHz performance in Doherty test fixture:
- Peak power of 50W
- At average power of 8W
 - Gain: 15.5 dB
 - Drain Efficiency: 48%
 - DPD correction to -54 dBc using 20 MHz LTE signal
 - Over 100 MHz instantaneous bandwidth capability

