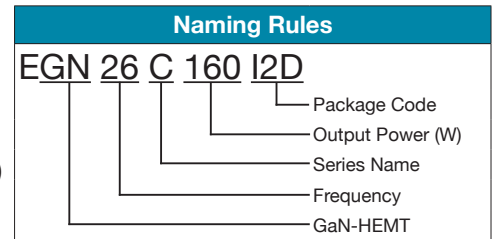


GaN HEMTs (High Electron Mobility Transistors)

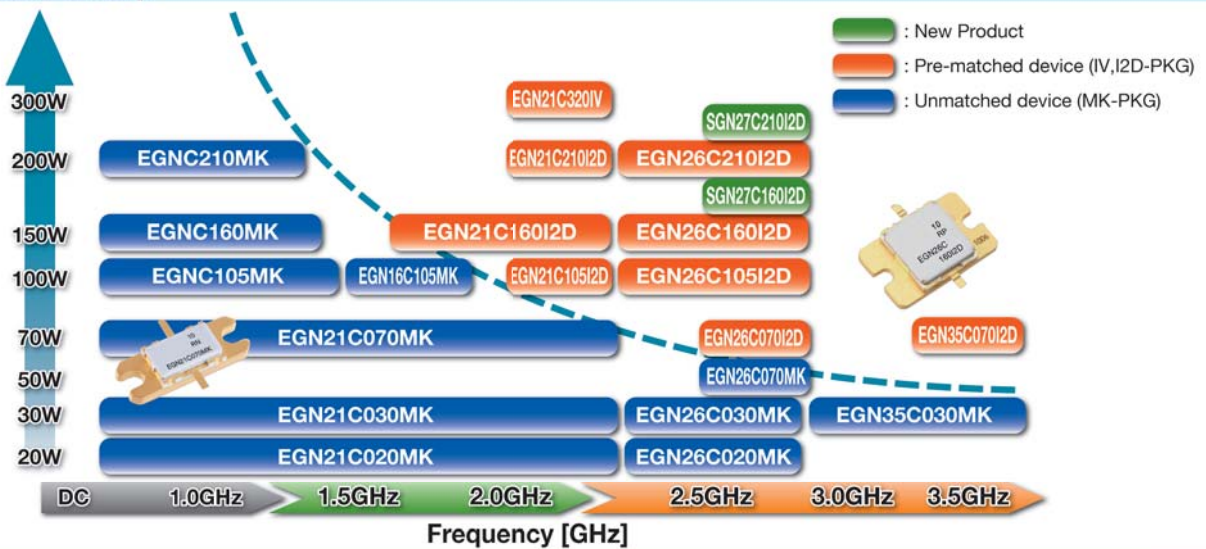
For Base Station (C Series)

Features

- Designed for 3G/LTE/WiMAX Base Station
- Optimized for Doherty Architecture
- Higher Load Impedance: 15 to 20Ω @Final Stage (Easy Match, Wide Band)
- High Operating Voltage: 50V
- High Power: Up to 320W Psat Single Ended
- High Gain: Gp=16dB @f=2.6GHz, 210W Device
- High Efficiency: 60-70% with Internal Class F Matching



C Series Lineup



Specifications (Final Stage)

Part Number	Frequency (GHz)	Psat ^{*1} Typ. (dBm)	Pout (Ave.) Typ. (dBm)	GP Typ. (dB)	η@Pout (Ave.) Typ. (%)	IDS (DC) (mA)	Rth Typ. (°C/W)	Outline/Package Code
EGNC105MK	0.9	51.0	43.0 ^{*3}	20.0 ^{*3}	35 ^{*3}	400	2.0	MK
EGNC160MK	0.9	52.5	44.5 ^{*3}	18.0 ^{*3}	35 ^{*3}	600	1.4	
EGNC210MK	0.9	53.5	45.5 ^{*3}	17.5 ^{*3}	35 ^{*3}	750	1.1	
EGN16C105MK	1.6	50.5	42.5 ^{*3}	19.0 ^{*3}	33 ^{*3}	400	2.0	I2D
EGN21C070MK	2.14	49.5	41.5 ^{*3}	17.0 ^{*3}	33 ^{*3}	300	2.5	
EGN21C105I2D	2.14	50.3	42.0 ^{*2}	18.0 ^{*2}	32 ^{*2}	400	2.0	
EGN21C160I2D	2.14	52.5	44.5 ^{*2}	18.0 ^{*2}	32 ^{*2}	600	1.4	IV
EGN21C210I2D	2.14	53.0	45.0 ^{*2}	18.0 ^{*2}	32 ^{*2}	750	1.1	
EGN21C320IV	2.14	55.0	47.0 ^{*2}	18.0 ^{*2}	31 ^{*2}	1100	0.8	
EGN26C070MK	2.6	48.8	40.8 ^{*3}	16.5 ^{*2}	30 ^{*2}	300	2.5	MK
EGN26C070I2D	2.6	48.8	40.8 ^{*3}	18.0 ^{*3}	35 ^{*3}	300	2.5	
EGN26C105I2D	2.6	50.3	42.0 ^{*3}	17.0 ^{*3}	32 ^{*3}	400	2.0	
EGN26C160I2D	2.6	52.5	44.5 ^{*3}	16.0 ^{*3}	30 ^{*3}	600	1.4	I2D
EGN26C210I2D	2.6	53.0	45.0 ^{*3}	16.0 ^{*3}	30 ^{*3}	750	1.1	
SGN27C160I2D	2.65	52.5	44.5 ^{*3}	16.3 ^{*3}	30 ^{*3}	600	1.4	
SGN27C210I2D	2.65	53.0	45.0 ^{*3}	16.3 ^{*3}	30 ^{*3}	750	1.1	I2D
EGN35C070I2D	3.5	48.8	40.8 ^{*3}	15.5 ^{*3}	28 ^{*3}	300	2.5	

*1: 10%-duty RF pulse

*2: Pout=(Ave.), f0=2.135GHz, f1=2.145GHz, W-CDMA (3GPP3.4 12-00) BS-1 64ch 47.5% clipping modulation (PAR=8.5dB@0.01%)

*3: Pout=(Ave.), W-CDMA (3GPP3.4 12-00) BS-1 64ch 85% clipping modulation (PAR=8.5dB@0.01%)

Note: Tc (op)=+25°C

GaN HEMTs (High Electron Mobility Transistors)

Specifications (Driver Stage)

Part Number	Frequency (GHz)	Psat ^{*1} Typ. (dBm)	Pout ^{*2} (Ave.) Typ. (dBm)	GP ^{*2} Typ. (dB)	η ² @Pout (Ave.) Typ. (%)	IDS (DC) (mA)	Rth Typ. (°C/W)	Outline/ Package Code
EGN21C020MK	2.14	43.5	30.0	19.0	12.5	100	6.0	MK
EGN21C030MK	2.14	45.0	31.5	19.0	12.5	150	5.0	
EGN26C020MK	2.6	43.5	30.0	18.0	12.5	100	6.0	
EGN26C030MK	2.6	45.0	31.5	18.0	12.5	150	5.0	
EGN35C030MK	3.5	45.0	31.5	16.5	11.0	150	5.0	

*1: 10%-duty RF pulse

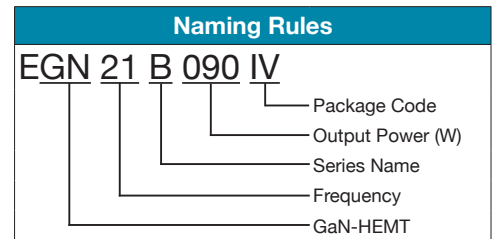
*2 : Pout=(Ave.), CW

Note: Tc (op)=+25°C

For Base Station (B Series)

Features

- Designed for 3G/LTE Base Station and Optimised for Straight Amplifier Architecture
- Higher Load Impedance: Around 10 Ω (Easy Match, Wide Band)
- High Operating Voltage: 50V
- High Power: Up to 180W
- High Efficiency
- Low Thermal Resistance (Rth)



Specifications

Part Number	Frequency (GHz)	Psat ^{*1} Typ. (dBm)	Pout (Ave.) Typ. (dBm)	GP Typ. (dB)	η @Pout (Ave.) Typ. (%)	IDS (DC) (mA)	Rth Typ. (°C/W)	Outline/ Package Code
EGN21B090IV	2.14	50.0	42.0 ^{*2}	16.0 ^{*2}	33 ^{*2}	500	1.2	IV
EGN21B180IV	2.14	53.0	45.0 ^{*2}	16.0 ^{*2}	32 ^{*2}	1000	0.6	

*1: 10%-duty RF pulse (DC supply constant)

*2: Pout=(Ave.), f0=2.135GHz, f1=2.145GHz, W-CDMA (3GPP3.4 12-00) BS-1 64ch 47.5% clipping modulation (PAR=8.5dB@0.01%)

*3: Pout=(Ave.), W-CDMA (3GPP3.4 12-00) BS-1 64ch 85% clipping modulation (PAR=8.5dB@0.01%)

Note: Tc (op)=+25°C

Package Photo

