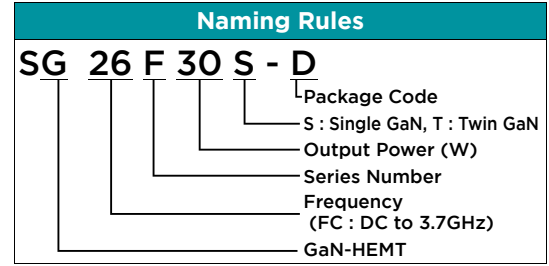


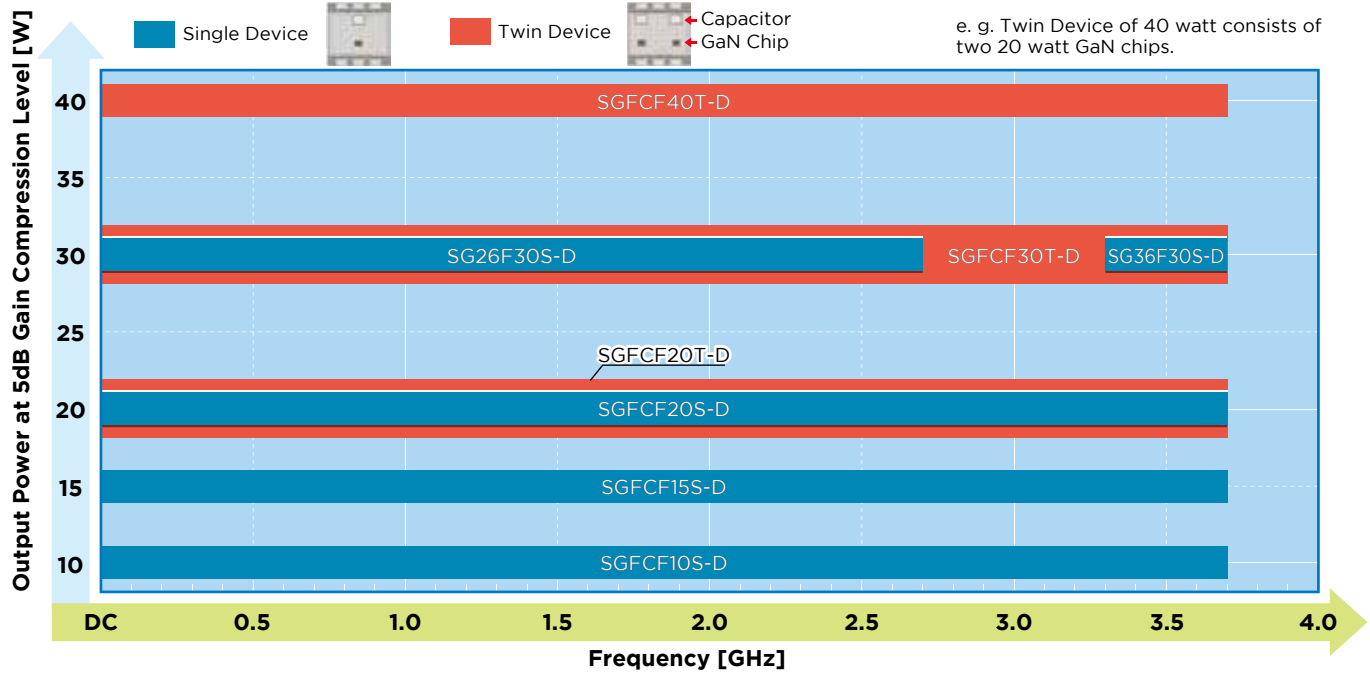
# GaN HEMTs for Base Station

## Features

- Designed for 3G/LTE/WiMAX Base Station
- Driver Stage for Macrocell & Final Stage for Microcell
- High Operating Voltage : 50V
- High Gain :  $G_p=19\text{dB}$  @ $f=2.65\text{GHz}$ , 20W (SGFCF20S-D)
- High Efficiency : 65% @ $f=2.65\text{GHz}$ , 20W (SGFCF20S-D)
- Full Mold SMT Package (Z2D)



## “F Series” Lineup



## Specifications (Driver and Final Stage)

Part Number	Single / Twin	Freq. (GHz)	Specified Freq. (GHz)	$P_{sat}^1$ (dBm)	$P_{out}^2$ (dBm)	$G_p^2$ (dB)	$\eta_{d^2}$ (%)	VDS (V)	IDS(DC) (mA)	$R_{th}^3$ ( $^{\circ}\text{C}/\text{W}$ )	Package
SG26F30S-D	Single	DC-2.7	2.65	46	32.5	18.5	13.5	50	150	5.5	Z2D
SGFCF10S-D	Single	DC-3.7	2.65	41	27.5	19.5	13.5	50	50	10	
SGFCF15S-D	Single	DC-3.7	2.65	42.5	29	19.5	13.5	50	75	9	
SGFCF20S-D	Single	DC-3.7	2.65	44	30.5	19	13.5	50	100	7	
SGFCF20T-D *4	Twin	DC-3.7	2.65	41	27.5	19.5	13.5	50	50	10	
SGFCF30T-D *4	Twin	DC-3.7	2.65	42.5	29	19.5	13.5	50	75	9	
SGFCF40T-D *4	Twin	DC-3.7	2.65	44	30.5	19	13.5	50	100	7	
SG36F30S-D	Single	3.3-3.7	3.6	45.5	32	17	12.5	50	150	5.5	

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

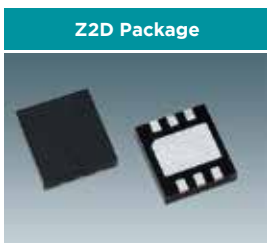
\*2: $P_{out}=(Ave.)$ , W-CDMA(3GPP3.4 12-00)BS-1 64ch 85% clipping modulation(PAR=8.5dB@0.01%)

\*3:Sampling Test : samples size 10pcs. Criteria(accept / reject)=(0 / 1)

\*4:Specification of one path

Note:  $T_c (op)=+25^{\circ}\text{C}$

## Product Photo

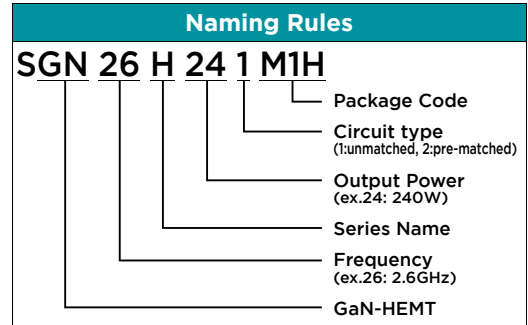


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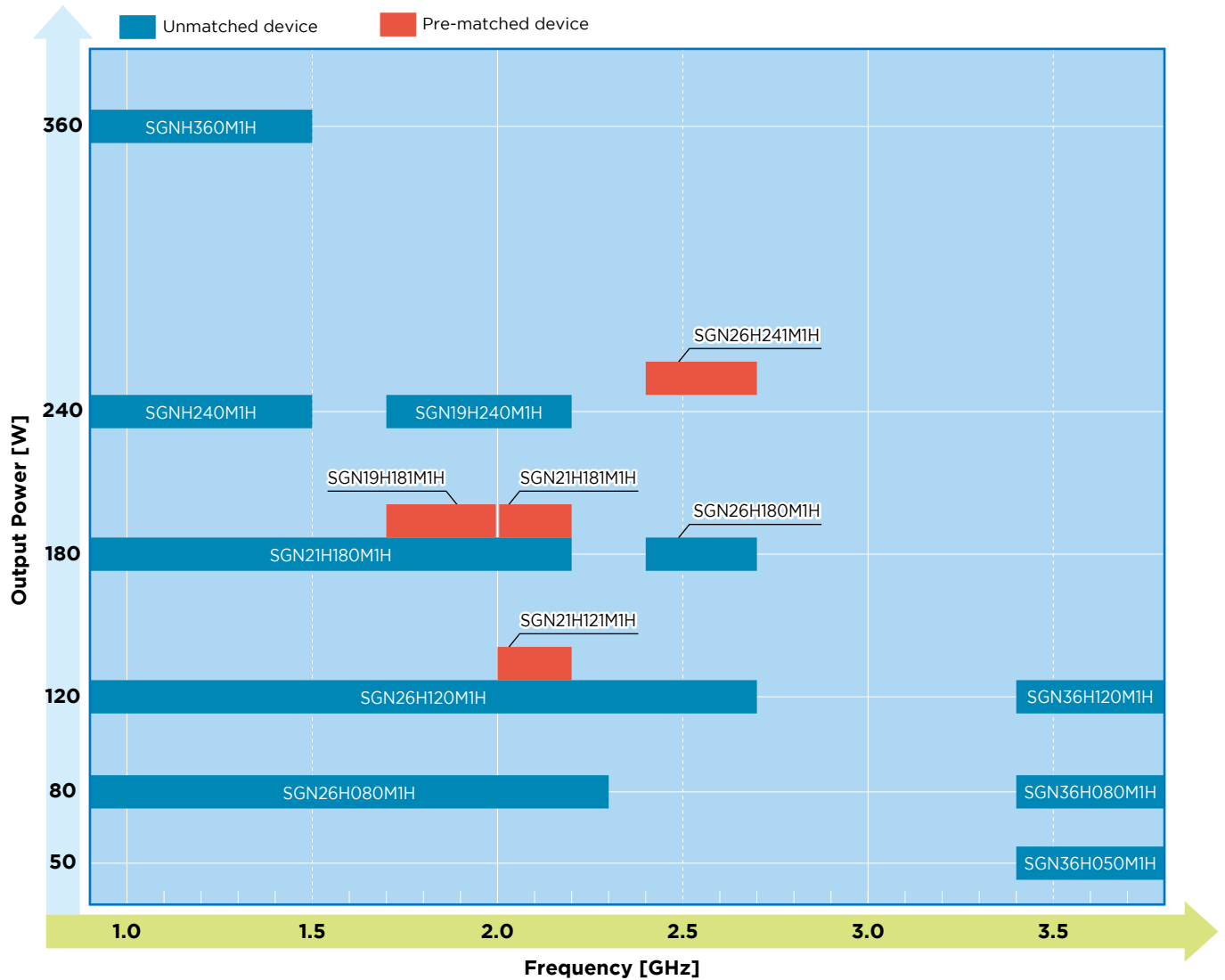
# GaN HEMTs for Base Station

## 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 360W Psat Single Ended
- High Gain: Gp=16.5dB @f=2.6GHz, 210W Device
- High Efficiency: 60-70% with Internal Class F Matching



## “H Series” Lineup



## Specifications (Final Stage)

Part Number	Freq. (GHz)	Psat <sup>*1</sup> (dBm)	Pout (dBm)	Gp <sup>*2</sup> (dB)	VDS (V)	IDS (DC) (mA)	Rth (°C/W)	Package
SGNH240M1H	0.9	54.6	46.0	17.5	50	800	1.2	M1H
SGN19H181M1H	1.88	52.6	44.5	16.5	50	600	1.4	
SGN19H240M1H	1.88	53.8	46.0	16.5	50	800	1.2	
SGN21H121M1H	2.17	50.8	43.0	16.0	50	400	1.7	
SGN21H180M1H	2.14	52.8	44.5	16.5	50	600	1.4	
SGN21H181M1H	2.17	52.6	44.5	16.0	50	600	1.4	
SGN26H080M1H	2.65	49.3	41.0	17.5	50	250	2.0	
SGN26H120M1H	2.65	50.8	43.0	17.0	50	400	1.7	
SGN26H180M1H	2.65	52.5	44.5	16.5	50	600	1.4	
SGN26H241M1H	2.65	54.0	46.0	15.0	50	800	1.2	
SGN36H050M1H	3.6	47.0	39.0	17.0	50	180	2.6	
SGN36H080M1H	3.6	49.1	41.0	16.0	50	250	2.0	
SGN36H120M1H	3.6	50.8	43.0	15.0	50	400	1.7	

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

\*2: Pout(ave), CW modulation Signal ( W-CDMA )

## Specifications (Peak Stage of Doherty Amplifier)

Part Number	Freq. (GHz)	Psat <sup>*1</sup> (dBm)	Gp <sup>*2</sup> (dB)	VDS (V)	Rth (°C/W)	Package
SGNH360M1H	0.9	55.6	18.5	50	1.2	M1H

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

\*2: Pout=51.5dBm, 10%-duty RF Pulse

## Product Photo

M1H Package

