



GaN-HEMT 210W

EGN26C210I2D

High Voltage - High Power GaN-HEMT

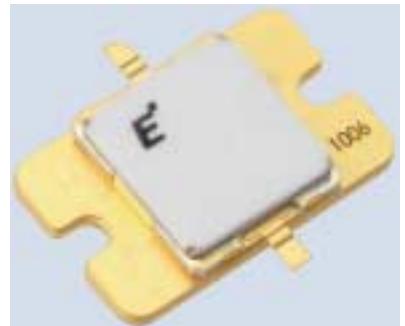
FEATURES

- High Voltage Operation : $V_{DS}=50V$
- High Power : 53.0dBm (typ.) @ P_{sat}
- High Efficiency: 62%(typ.) @ P_{sat}
- Power Gain : 16dB(typ.) @ $f=2.6GHz$
- Proven Reliability

DESCRIPTION

SEDI's GaN-HEMT offers high efficiency, ease of matching, greater consistency and broad bandwidth for high power L-band amplifiers with 50V operation, and gives you higher gain.

This new product is ideally suited for use from 2.3GHz to 2.7GHz W-CDMA & LTE design requirements as it offers high gain, long term reliability and ease of use.



ABSOLUTE MAXIMUM RATINGS (Case Temperature $T_c=25^\circ C$)

Item	Symbol	Condition	Rating	Unit
Operating-Voltage	V_{DS}		55	V
Drain-Source Voltage	V_{DS}	$V_{GS}=-8V$	160	V
Gate-Source Voltage	V_{GS}		-15	V
Total Power Dissipation	P_t		173	W
Storage Temperature	T_{stg}		-65 to +175	$^\circ C$
Channel Temperature	T_{ch}		250	$^\circ C$

RECOMMENDED OPERATING CONDITION

Item	Symbol	Condition	Limit	Unit
DC Input Voltage	V_{DS}		≤ 55	V
Forward Gate Current	I_{GF}	$R_G=5\Omega$	≤ 204	mA
Reverse Gate Current	I_{GR}	$R_G=5\Omega$	≥ -7.8	mA
Channel Temperature	T_{ch}		≤ 180	$^\circ C$
Average Output Power	$P_{ave.}$		≤ 50.5	dBm

ELECTRICAL CHARACTERISTICS (Case Temperature $T_c=25^\circ C$)

Item	Symbol	Condition	Limit			Unit
			min.	Typ.	Max.	
Pinch-Off Voltage	V_p	$V_{DS}=50V$ $I_{DS}=54.4mA$	-1.0	-1.5	-2.0	V
Saturated Power	P_{sat} *1	$V_{DS}=50V$	52.0	53.0	-	dBm
Drain Efficiency	η_d *2	$I_{DS}(DC)=750mA$	25	30	-	%
Power Gain	G_p *2	$f=2.6GHz$	15.0	16.0	-	dB
Thermal Resistance	R_{th}	Channel to Case at 105W P_{DC}	-	1.1	1.3	$^\circ C/W$

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

*2 : Pout = 45.0dBm, CW modulation Signal (W-CDMA or WiMAX)





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I2D Package Outline
Metal-Ceramic Hermetic Package

