

PRELIMINARY PTH 32010*

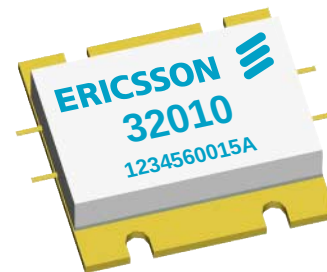
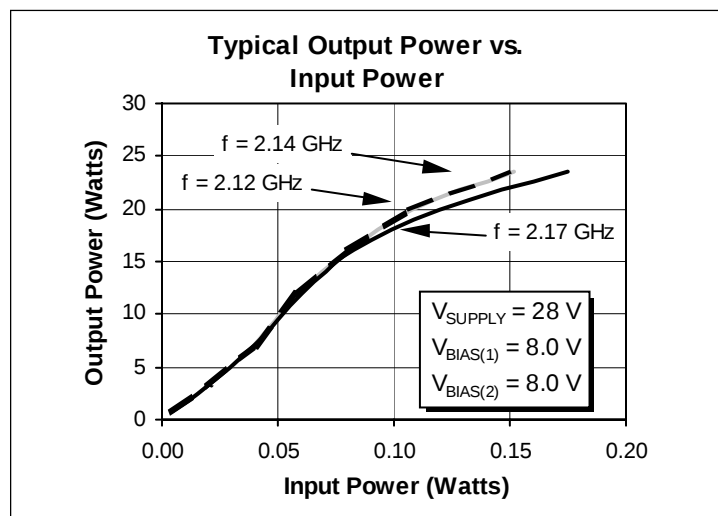
25 Watts, 2.1–2.2 GHz

50-Ohm High-Gain Power Hybrid

Description

The PTH 32010 is a high-gain 50-ohm power HIT® intended for applications requiring linear amplification and high gain from 2.1 to 2.2 GHz. The part is designed to operate with 50-ohm source and load impedances and includes bias circuitry with temperature compensation. This device may be used as a high-gain driver or as a final output device. The PTH 32010 simplifies system design and saves space with an overall footprint of 1.21 square inch.

- **Performance at 2.120 to 2.170 GHz,**
 $V_{\text{SUPPLY}} = 28 \text{ V}$, $V_{\text{BIAS}(1)} = 8.0 \text{ V}$, $V_{\text{BIAS}(2)} = 8.0 \text{ V}$
 - Power Gain = +25 dB Nom.
 - Output Power = 20 Watts (P-1dB) Typ
 - Small Signal Flatness = $\pm 0.2 \text{ dB}$ Typ
- **Exceptional phase linearity and delay characteristics**
- **Linearity optimized for “backed off” WCDMA operation**



Package J

Performance Characteristics

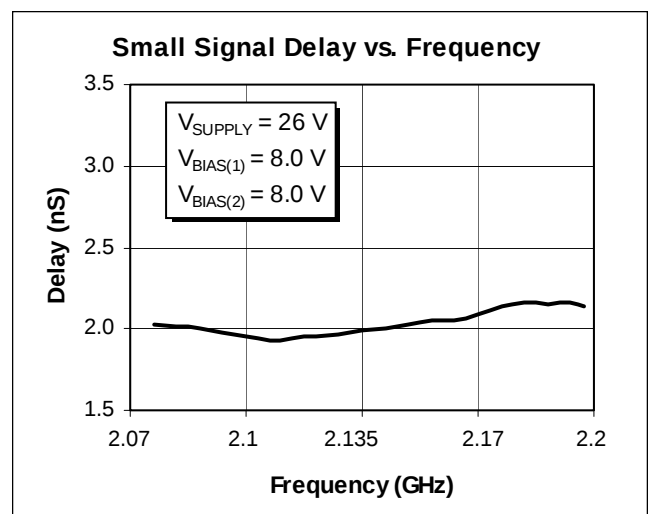
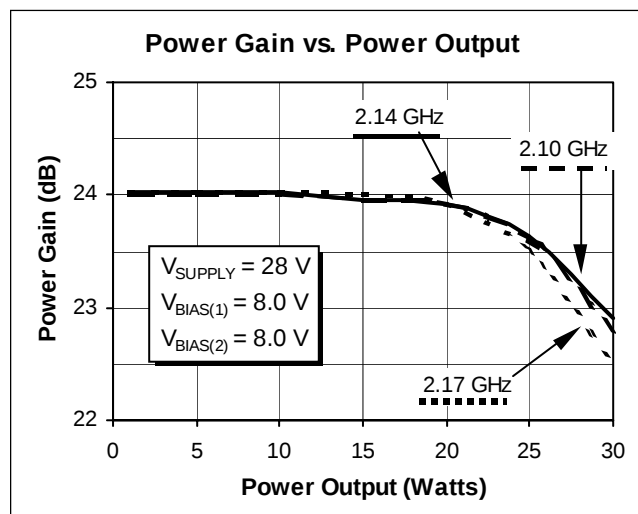
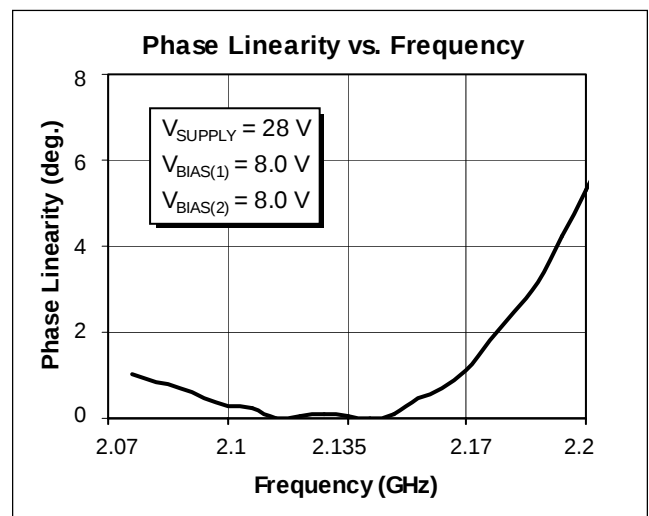
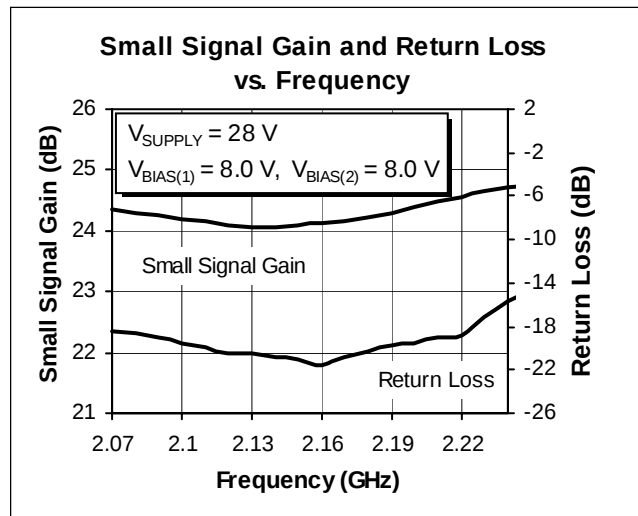
Parameter	Symbol	Min	Typ	Max	Units
Frequency Range	f	2.110	—	2.170	GHz
Output Power at 1 dB Compressed $V_{\text{DS}} (\text{Nom.}) = 28 \text{ V}$, $V_{\text{BIAS}(1)} = 8.0 \text{ V}$, $V_{\text{BIAS}(2)} = 8.0 \text{ V}$	P-1dB	—	25	—	W
Input VSWR $V_{\text{DS}} (\text{Nom.}) = 28 \text{ V}$, $V_{\text{BIAS}(1)} = 8.0 \text{ V}$, $V_{\text{BIAS}(2)} = 8.0 \text{ V}$	ψ	—	1.2:1	1.5:1	—
Small Signal Gain $V_{\text{DS}} (\text{Nom.}) = 28 \text{ V}$, $V_{\text{BIAS}(1)} = 8.0 \text{ V}$, $V_{\text{BIAS}(2)} = 8.0 \text{ V}$, $I_{\text{DQ}(1)} = 200 \text{ mA}$, $I_{\text{DQ}(2)} = 450 \text{ mA}$	P_g	TBD	24	—	dB
Gain Flatness $V_{\text{DS}} (\text{Nom.}) = 28 \text{ V}$, $V_{\text{BIAS}(1)} = 8.0 \text{ V}$, $V_{\text{BIAS}(2)} = 8.0 \text{ V}$, $I_{\text{DQ}(1)} = 200 \text{ mA}$, $I_{\text{DQ}(2)} = 450 \text{ mA}$	—	—	± 0.2	—	dB
Linearity, 3 GPP W-CDMA Channel Bandwidth = 3.84 MHz, $P_{\text{AVG}} = 30 \text{ dBm}$; Peak/ Avg 9 dB	ACPR	—	57	—	dBc

* Note: Specifications for this product are preliminary and subject to change without notice. Please contact your sales representative for further product information. Complete product information is available on our Website at: www.ericsson.com/rfpower.

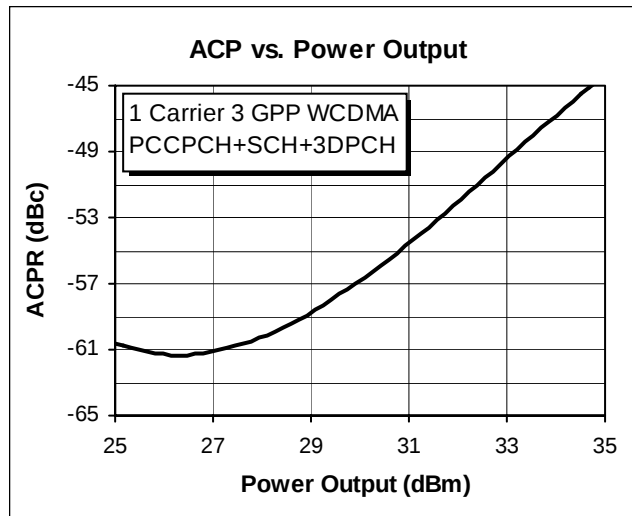
Performance Characteristics (Continued)

Parameter	Symbol	Min	Typ	Max	Units
Operating Temperature	—	0	—	85	°C
Mean Group Delay	—	—	TBD	—	ns
Group Delay Flatness	—	—	500	TBD	ps
Insertion Phase (from golden standard)	—	—	—	±10°	Deg.

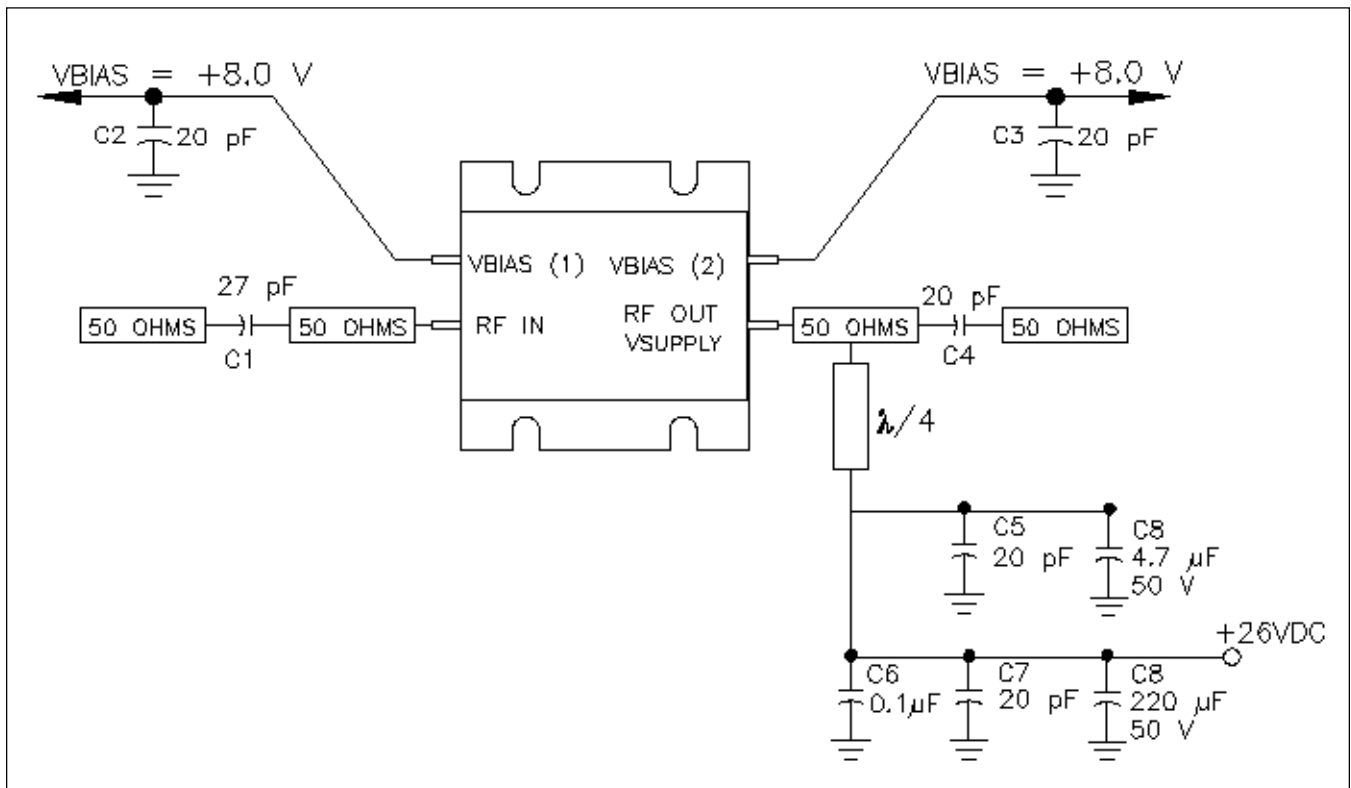
Typical Performance



Typical Performance (Continued)



Test Fixture



Schematic

Case Outline Specifications