

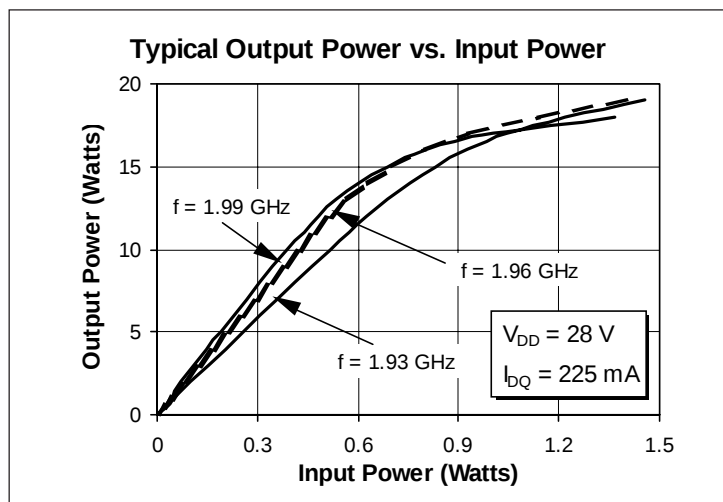


HIT 1920-10 PTE 31042* 10 Watts, 1.9–2.0 GHz 50-Ohm Power Hybrid

Description

The 1920-10 is a 50-ohm power hybrid intended for applications requiring linear power amplification in the PCS frequency range. The part is designed to operate with 50-ohm source and load impedances and includes bias circuitry with temperature compensation. The design is intended to simplify system design and save space with an overall size of less than one square inch. 100% lot traceability is standard.

- Guaranteed Performance at 1.93 to 1.99 GHz, 28 V
 - Output Power = 12 Watts (P-1dB) Min
 - Power Gain = 11 dB Min
 - Efficiency = 40% Min @ P-1dB
- Rugged Hybrid Design
- Input Decoupling
- High Single Stage Gain
- Excellent Linearity
- Input VSWR less than 1.5:1
- Gold Metallization



Performance Characteristics

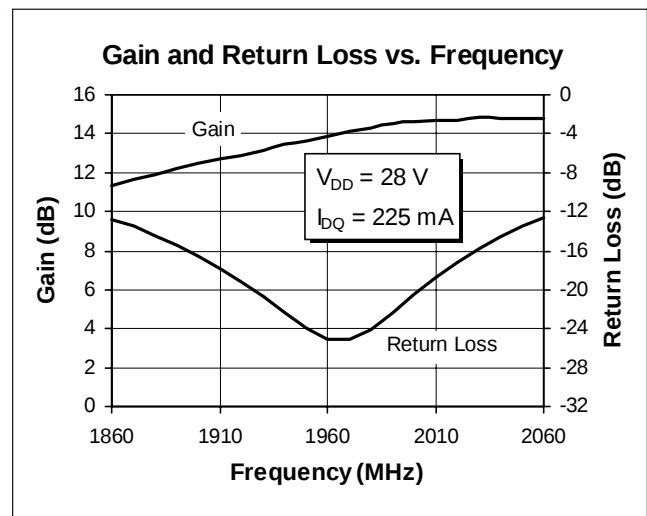
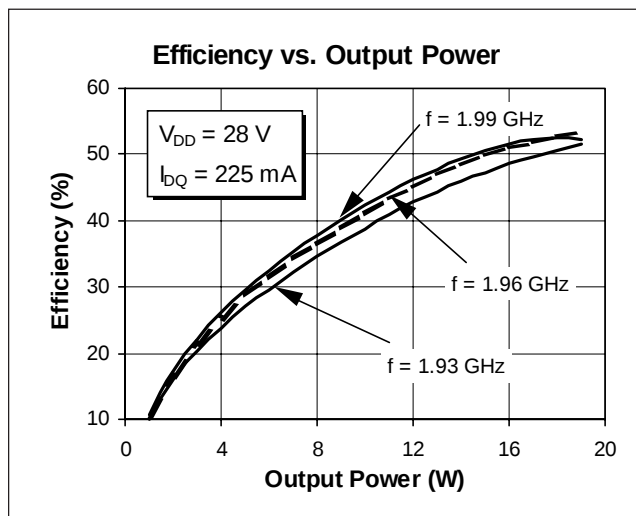
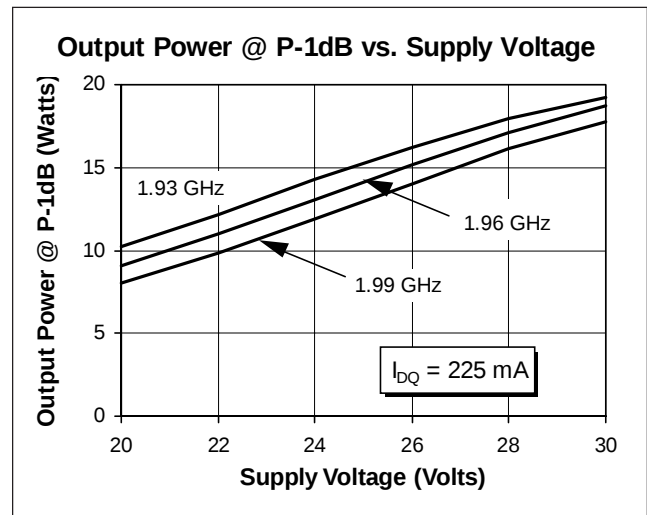
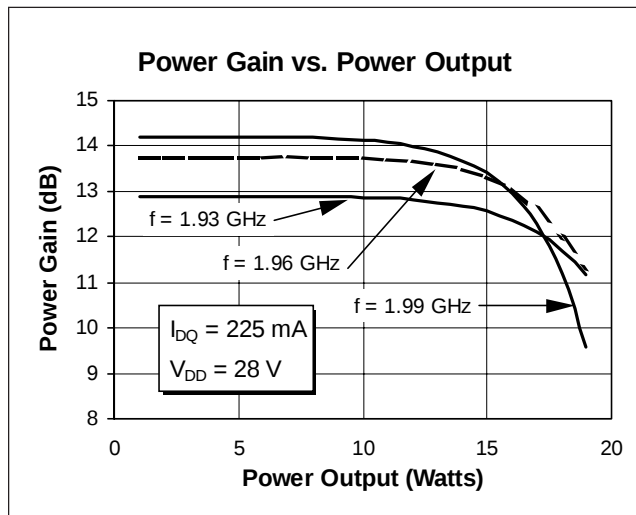
Parameter	Symbol	Min	Typ	Max	Units
Frequency Range V_{DD} (Nom.) = 28, I_{DQ} (Nominal) = 225 mA	f	1930	—	1990	MHz
Power Gain V_{DD} (Nom.) = 28, I_{DQ} (Nominal) = 225 mA	G_p	11	12.5	—	dB
Output Power at 1 dB Compressed V_{DD} (Nom.) = 28, I_{DQ} (Nominal) = 225 mA	P-1dB	12	16	—	W
Input VSWR V_{DD} (Nom.) = 28, I_{DQ} (Nominal) = 225 mA	ψ	—	1.25:1	1.5:1	—
Efficiency at P-1dB V_{DD} (Nom.) = 28, I_{DQ} (Nominal) = 225 mA	η	40	48	—	%

* A "PTE" number indicates that specification is preliminary and subject to change. Order this product or obtain additional information from your Ericsson Sales Representative.

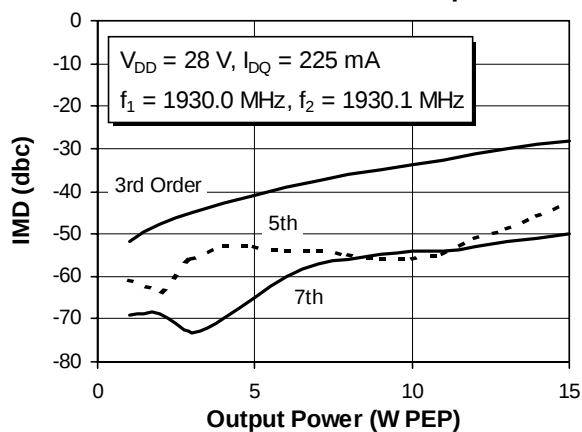
Maximum Ratings

Parameter	Symbol	Value	Unit
Supply Voltage	V_{DD}	32	Vdc
Bias Current	I_{DQ}	1000	mA
Operating Temperature	T_{flange}	90	°C
Total Device Dissipation at $T_{flange} = 25^{\circ}\text{C}$ Above 25°C derate by	P_D	TBD	Watts W/°C
Storage Temperature	T_{STG}	125	°C

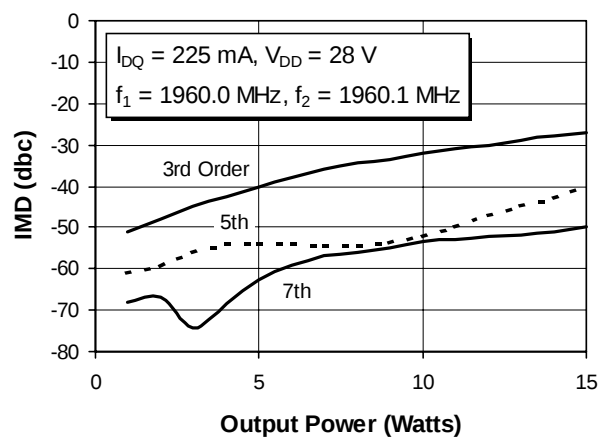
Typical Performance



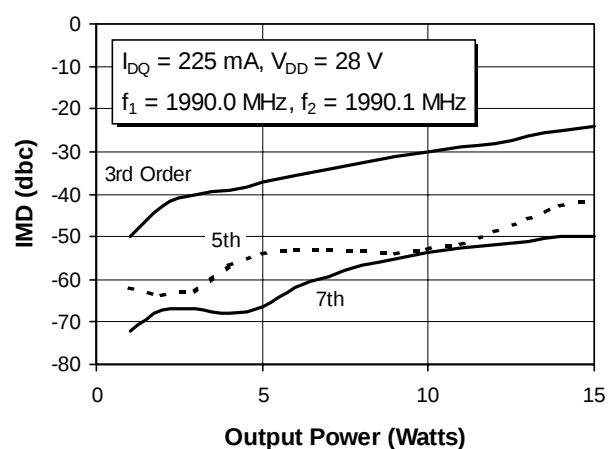
Intermodulation Distortion vs. Output Power



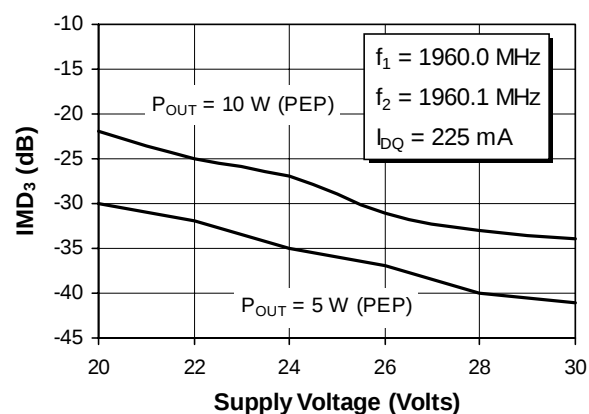
Intermodulation Distortion vs. Output Power



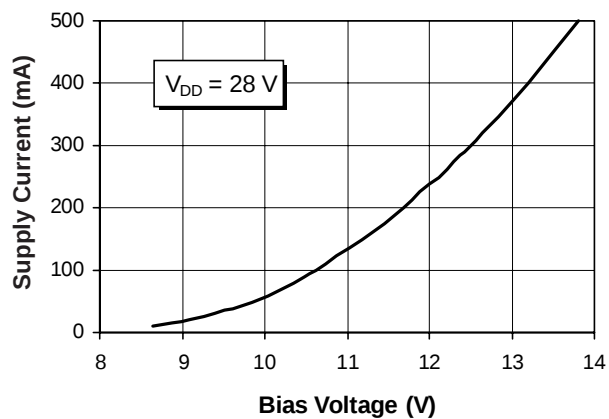
Intermodulation Distortion vs. Output Power



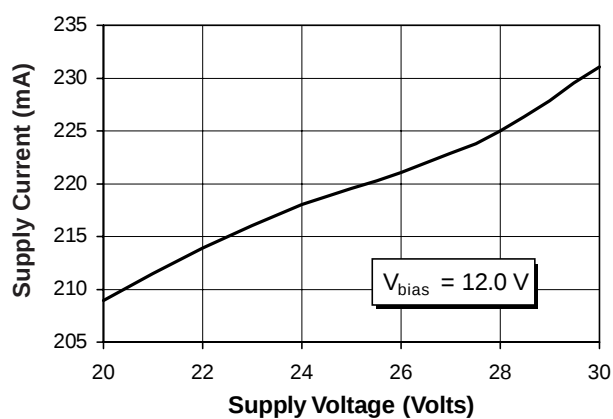
Intermodulation Distortion vs. Supply Voltage



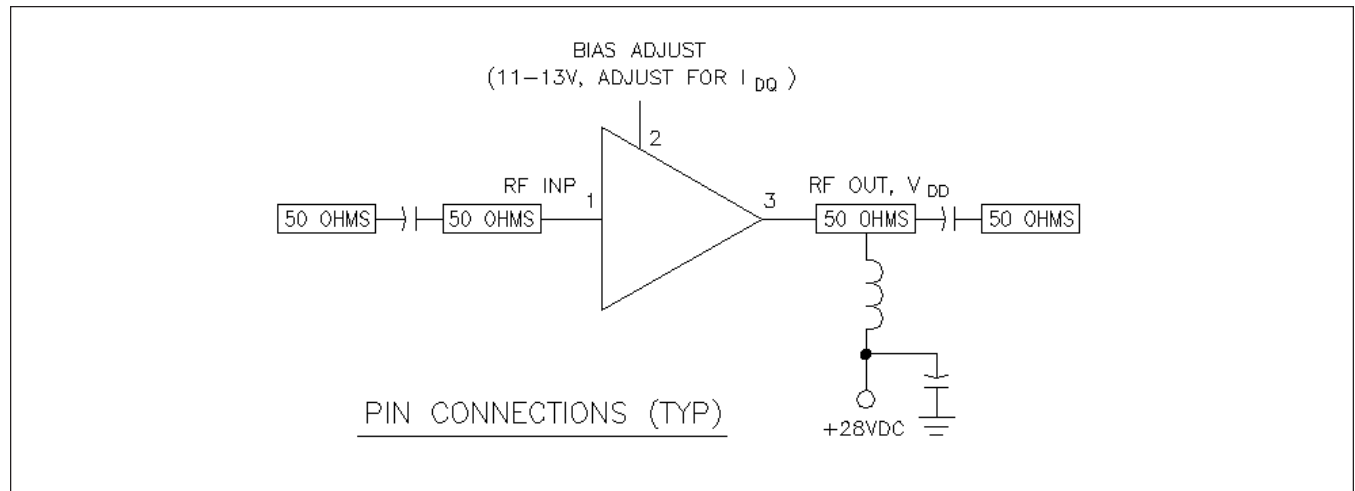
Supply Current vs. Bias Voltage



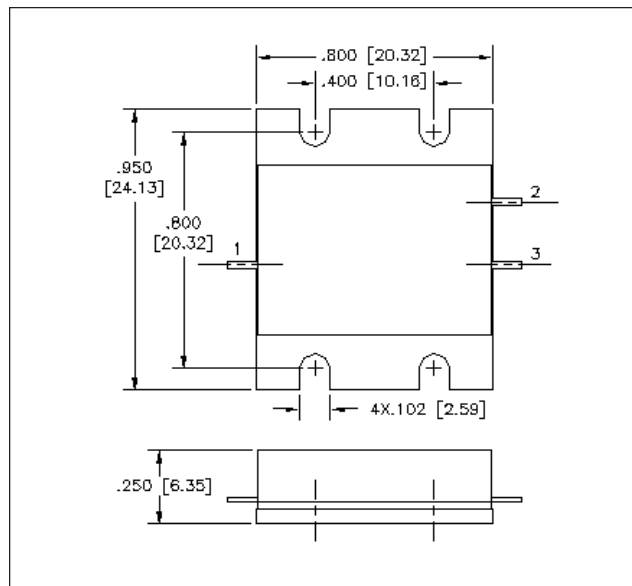
Supply Current vs. Supply Voltage



Schematic



Package Mechanical Specifications



Package A

Ericsson Components
RF Power Products
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 Morgan Hill, CA 95037 USA
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