MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

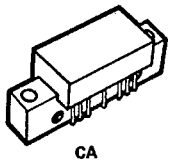
CA2885
CA2885H

17.7 dB
40–550 MHz
2 WATTS
WIDEBAND
LINEAR AMPLIFIERS

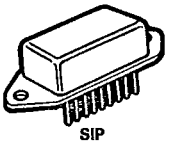
The RF Line
Wideband Linear Amplifiers

. . . designed for amplifier applications in 50 to 100 ohm systems requiring wide bandwidth, low noise and low distortion. This hybrid provides excellent gain stability with temperature and linear amplification as a result of the push-pull circuit design.

- Specified Characteristics at V_{CC} = 24 V, T_C = 25°C:
  - Frequency Range — 40 to 550 MHz
  - Output Power — 2 Watt Min @ 1 dB Compression, f = 200 MHz
  - Power Gain — 17.7 dB Typ @ f = 50 MHz
  - Noise Figure — 7 dB Typ @ f = 500 MHz
  - ITO — 43 dBm Typ @ f = 500 MHz
- All Gold Metallization for Improved Reliability
- Available in Bent Lead Option and Hermetic Package



CA
CASE 714F-01, STYLE 1
CA2885



SIP
CASE 826-01, STYLE 1
CA2885H

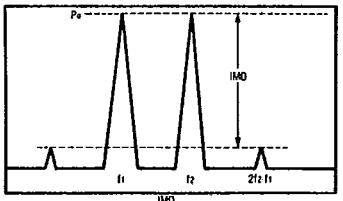
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
DC Supply Voltage	V_{CC}	28	Vdc
RF Power Input	P_{in}	+16	dBm
Operating Case Temperature Range	T_C	−20 to +90	°C
Storage Temperature Range	T_{stg}	−40 to +100	°C

ELECTRICAL CHARACTERISTICS (T_C = 25°C, V_{CC} = 24 V, 50 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	550	MHz
Gain Flatness f = 40–550 MHz f = 10–700 MHz	—	— —	— —	±1 ±3	dB
Power Gain (f = 50 MHz)	P_G	18	18.5	19	dB
Noise Figure, Broadband f = 60 MHz f = 500 MHz	NF	— —	5 7	— —	dB
Power Output — 1 dB Compression (f = 200 MHz)	$P_{o\ 1dB}$	2	—	—	mW
Third Order Intercept (See Figure 1, f_1 = 500 MHz)	ITO	—	43	—	dBm
Input/Output VSWR (f = 40–500 MHz)	VSWR	—	2:1	—	—
Second Harmonic Distortion (Tone at 10 mW, f_{2H} = 40–500 MHz)	d_{so}	—	−66	—	dB
Reverse Isolation (f = 40–500 MHz)	—	—	25	—	dB
Supply Current	I_{CC}	—	440	—	mA

Note: Bent lead option for CA2885 is available in Case 714J-01 (Style 1).



$$ITO = P_o + \frac{IMD}{2} \text{ @ IMD} > 60dB$$
PEP = 4X Po @ IMD = -32dB

Figure 1. Intermodulation Test

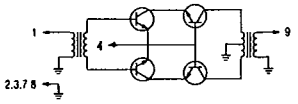


Figure 2. Functional Schematic