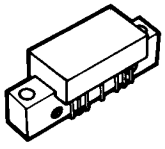
CA2700

The RF Line
35-Channel (300 MHz) CATV Line Extender Amplifier

38 dB
40–300 MHz
35-CHANNEL CATV
LINE EXTENDER
AMPLIFIER

. . . designed for broadband applications requiring low-distortion amplification. Specifically intended for CATV market requirements. These amplifiers feature ion-implanted arsenic emitter transistors and an all gold metallization system.

- Specified 35 Channel, 24 Volt Characteristics:
  Bandwidth — 40–300 MHz
  Power Gain — 38 dB Typ @ f = 50 MHz
  Noise Figure — 5.5 dB Max @ f = 300 MHz
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization for Improved Reliability



CA
CASE 714F-01, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V_{in}	44	dBmV
DC Supply Voltage	V_{CC}	28	Vdc
Operating Case Temperature Range	T_C	−20 to +100	°C
Storage Temperature Range	T_{stg}	−40 to +100	°C

ELECTRICAL CHARACTERISTICS (V_{CC} = 24 V, T_C = 25°C, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	300	MHz
Power Gain — 50 MHz	G_P	37	38	39	dB
Slope	S	0	—	+1.5	dB
Gain Flatness	—	—	—	±0.4	dB
Return Loss — Input/Output (f = 40–300 MHz)	IRL/ORL	18	—	—	dB
Second Order Intermodulation Distortion (V_{out} = +50 dBmV per ch., ch. 2, 13, R)	IMD	—	—	−68	dB
Cross Modulation Distortion (V_{out} = +46 dBmV per ch., ch. 2, 35-channel flat)	XMD	—	—	−64	dB
Composite Triple Beat (V_{out} = +46 dBmV per ch., ch. W, 35-channel flat)	CTB	—	—	−67	dB
Noise Figure (f = 50 MHz) (f = 300 MHz)	NF	— —	— —	5 5.5	dB
DC Current	I_{DC}	—	310	—	mA

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