

MOTOROLA
SEMICONDUCTOR
 TECHNICAL DATA

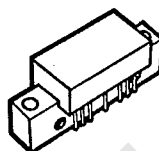
The RF Line
40-Channel (330 MHz) CATV
Line Extender Amplifier

... 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 — 40–330 MHz
 Power Gain — 34 dB Typ @ f = 50 MHz
 Noise Figure — 5.5 dB Max @ f = 330 MHz
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization for Improved Reliability

CA3600

34 dB
 40–330 MHz
 40-CHANNEL CATV
 LINE EXTENDER
 AMPLIFIER



CA (POS. SUPPLY)
 CASE 714F-01, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V _{in}	+50	dBmV
DC Supply Voltage	V _{CC}	28	V _{dc}
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	—	330	MHz
Power Gain — 50 MHz	G _p	33	34	35	dB
Slope	S	0	—	+1.7	dB
Gain Flatness	—	—	—	±0.3	dB
Return Loss — Input/Output (f = 40–330 MHz)	IRL/ORL	18	—	—	dB
Second Order Intermodulation Distortion (V _{out} = +50 dBmV per ch., ch. 2, 13, R)	IMD	—	—	-67	dB
Cross Modulation Distortion (V _{out} = +46 dBmV per ch., ch. 2, 40-channel flat)	XMD	—	—	-62	dB
Composite Triple Beat (V _{out} = +46 dBmV per ch., ch. H2, 40-channel flat)	CTB	—	—	-64	dB
Noise Figure (f = 50 MHz)	NF	—	—	4.5	dB
(f = 330 MHz)		—	—	5.5	
DC Current	I _{DC}	—	310	—	mA

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