

NEC
ELECTRON DEVICE

THIN FILM HYBRID INTEGRATED CIRCUIT
MC-5385

6427525 N E C ELECTRONICS INC

72C 08396 D T-74-09-01

450 MHz

18 dB OUTPUT

CATV TRUNK AMPLIFIER

DESCRIPTION AND APPLICATIONS

The MC-5385 is a thin film hybrid integrated circuit designed for VHF-CATV application in the 40 to 450 MHz band. The MC-5385 is a "Post-amplifier" which features low-noise figure and low distortion at high level output. It will operate as a flat amplifier with 18 dB gain or in a push-pull circuit with a typical output of 115 to 120 dB μ V, 75 Ω . Reliability and performance uniformity are assured by NEC's stringent quality and control procedures. The use of the MC-5385 offers reductions in the number of operations, assembly time, parts control, maintenance and ease of design.

FEATURES

- Operates as a flat amplifier from 40 to 450 MHz without adjustments or external components.
- Input and output matching to 75 Ω .
- Low distortion.
- Low noise figure (7.0 dB TYP.)

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Supply Voltage	V_{CC}	28	V
Operating Current	I_{CC}	250	mA
Input Voltage	V_i	70	dBmV
Total Power Dissipation	P_T	8.0 ($T_c=75^\circ\text{C}$)	W
Operating Temperature	T_{opt}	-30 to +90	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +100	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$, $V_{CC}=+24\text{V}$, $Z_S=Z_L=75\Omega$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Supply Voltage	V_{CC}		24		V	
Operating Current	I_{CC}		210	230	mA	
Gain	G_V	17.8	18.2	18.6	dB	f=50 MHz
Gain	G_V	18.5	19.0	20.0	dB	f=450 MHz
Gain Slope	Slope	0.3		1.5	dB	f=40 to 450 MHz
Gain Flatness	Flatness		± 0.1	± 0.2	dB	f=40 to 450 MHz
Input Return Loss	IRL	18			dB	f=40 to 450 MHz
Output Return Loss	ORL	18			dB	f=40 to 450 MHz
Noise Figure	NF		7.0	8.0	dB	f=40 to 450 MHz
Composite Triple Beat	CTB		-62	-60	dB	$V_O=46\text{ dBmV}$, 53ch, Flat
Cross Modulation	X-mod		-64	-62	dB	$V_O=46\text{ dBmV}$, 53ch, Flat
2nd Intermodulation	IMD		-74	-72	dB	$V_O=50\text{ dBmV}$, 2, S, H-4ch

Subject to change without any notice.

MC-5385

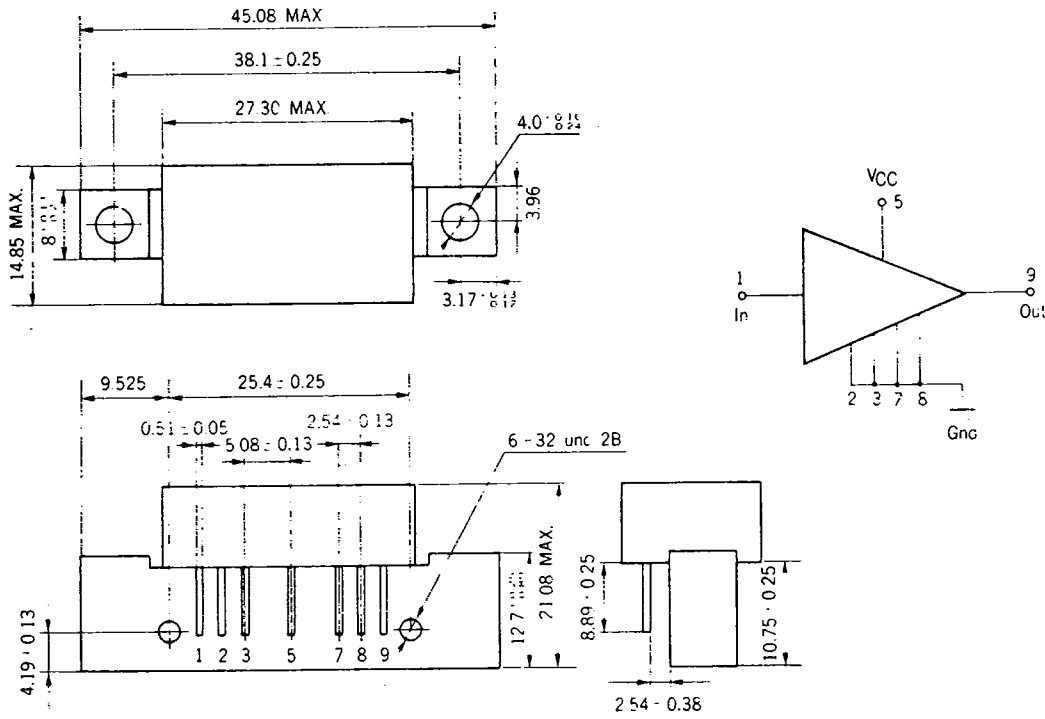
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PACKAGE DIMENSIONS (Unit : mm)



N E C ELECTRONICS INC 72 DE 6427525 0008397 3

Nippon Electric Co., Ltd.

NEC Building, 33-1, Shiba Gocho, Minato-ku, Tokyo 108, Japan
Tel: Tokyo 454-1111
Telex Address: NECTOK J22686
Cable Address: MICROPHONE TOKYO

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