

SH 120

HYBRID CIRCUIT

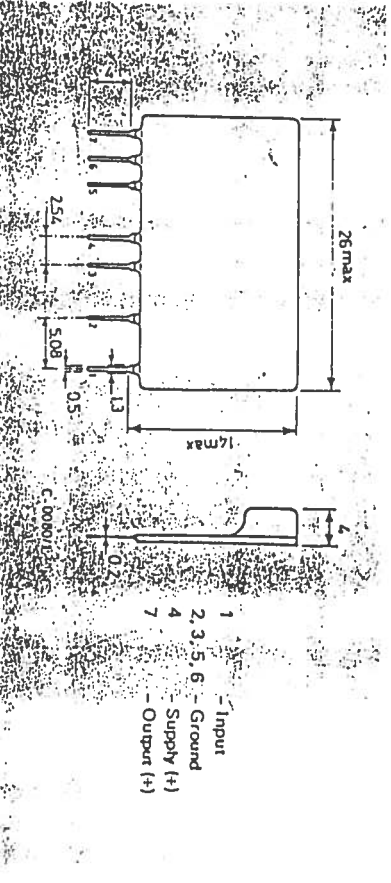
HYBRID 12V WIDE-BAND AMPLIFIER

Two stage hybrid wide-band amplifier for use in two-way radios, antenna amplifiers and general purpose applications from 30 to 900 MHz. This circuit is particularly suitable for DC supply through the output coaxial cable.

ABSOLUTE MAXIMUM RATINGS

V_s	Supply voltage	20	V
I_s	Circuit current	30	mA
P_{tot}	Power dissipation at $T_{amb} \leq 70^\circ\text{C}$	0.6	W
V_M	Peak voltage on pins 1 and 7	28	V
P_M	Peak RF power on pins 1 and 7	100	mW
T_{stg}	Storage temperature	-40 to 125	$^\circ\text{C}$
T_{op}	Operating temperature	-20 to 70	$^\circ\text{C}$

MECHANICAL DATA

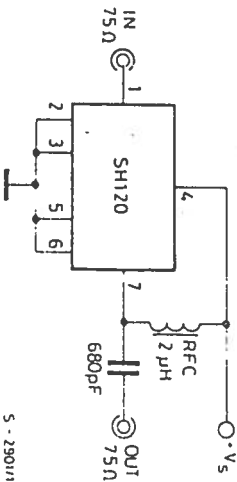


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ELECTRIC CHARACTERISTICS ($T_{amb} = 25^\circ\text{C}$, $V_s = 12\text{V}$, $Z = 75\Omega$ unless otherwise specified)

Parameter	Test conditions	Min.	Typ.	Max.	Unit
I_s	Supply current		20	22	mA
G_v	Gain		17	19	dB
ΔG_v	Gain flatness		± 1	± 1.5	dB
	Input VSWR			2	-
	Output VSWR			2.5	-
NF	Noise figure		4.5	5.5	dB
$ S_{12} ^2$	Back attenuation		30	26	dB
V_o	Output voltage		98	100	dB μV
	1 dB Gain compression			111	dB μV

TEST CIRCUIT



Note: Input pin internally DC isolated by 680 pF capacitor

5 - 2901/1