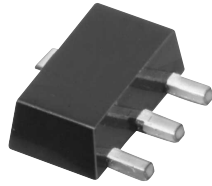


Surface Mount

Monolithic Amplifier

50Ω, High dynamic range, DC to 1 GHz

NEW!
Gali 74
SOT-89
(DF 782)

Features

- InGaP HBT IF and RF amplifier
- frequency range, DC to 1 GHz, usable to 4 GHz
- high gain, 25.1 dB typ. at 100 MHz
- up to +19.2 dBm typ. output power at 100 MHz
- high IP3, +38 dBm at 100 MHz
- low noise figure, 2.7 dB typ.
- unconditionally stable
- low thermal resistance
- transient protected
- patent pending
- low cost \$1.85 (qty. 1000)

Applications

- cellular
- broadband
- communication receivers & transmitters

Electrical Specifications @ 25°C

MODEL NO.	FREQ.* (GHz)	GAIN, dB Typical						MAXIMUM POWER (dBm)					DYNAMIC RANGE				VSWR (:1) Typ.		MAXIMUM RATING**		DC OPERATING POWER @ Pin 3***				THERMAL RESISTANCE	PRICE \$
		over frequency, GHz						Output (1 dB Comp.) Typ.					NF IP3 (dBm) Typ.				In Out		I P	Cur- rent	Volt Min Max				θjc, typ. °C/W	Qty. (25)
		f _L -f _u	0.1	1	2	3	4	Min.@ 1GHz	0.1 GHz	0.5 GHz	1.0 GHz	Min.@ 0.1GHz	(dB) Typ.	0.1 GHz	0.5 GHz	1.0 GHz			mA	mW	(mA)	4.8	4.3	5.3		
Gali74	DC-1	25.1	21.8	18	15.3	13.4	20	19.2	19	18.3	18	10	2.7	38	37	33	1.2	1.6	130	700	80	4.8	4.3	5.3	120	2.35

* Low frequency cutoff determined by external coupling capacitors.

** Permanent damage may occur if any of these limits are exceeded.

These ratings are not intended for continuous normal operation.

***Reliability predictions and normal operating conditions are applicable at current specified.

Maximum Ratings

Operating Temperature -45°C to 85°C

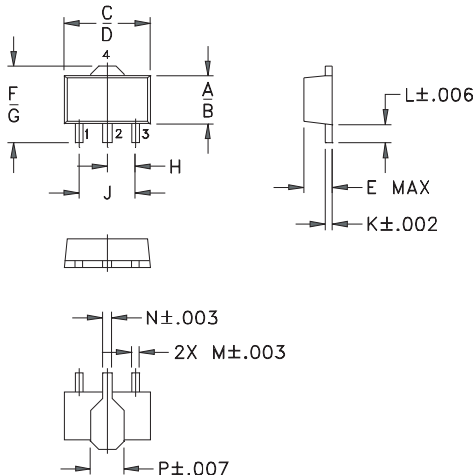
Storage Temperature -65°C to 150°C

Model Identification

Model	Marking†
GALI-74	74

†Prefix letter (optional) designates assembly location. Suffix letters (optional) are for wafer identification.

Outline Drawing (DF782)



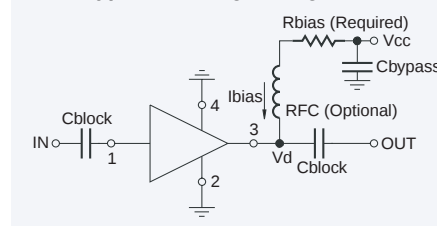
Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt.
.102	.090	.181	.173	.063	.167	.155	.059	.118	.015	.041	.016	.019	.065	grams
2.59	2.29	4.60	4.39	1.60	4.24	3.94	1.50	3.00	0.38	1.04	0.41	0.48	1.65	.2

Pin Configuration

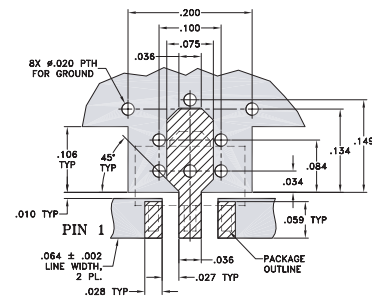
RF IN	1
RF OUT	3
DC	3
GND EXT.	2,4

Typical Biasing Configuration



R BIAS	
"1%" Resistor Values	
Vcc	GALI-74
7	28.7
8	41.2
9	53.6
10	66.5
11	78.7
12	90.9
13	102
14	115
15	127

Suggested PCB Layout (PL-019)



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

□ DENOTES PCB COPPER LAYOUT
 ▨ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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