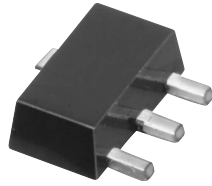


Surface Mount

Monolithic Amplifier

NEW!
Gali 74

50Ω, High dynamic range, DC to 1 GHz



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 θjc, typ. °C/W	PRICE \$ Qty. (25)		
		over frequency, GHz						Output (1 dB Comp.) Typ.				NF IP3 (dBm) Typ.				In	Out	I	P	Current (mA)							
	f _L -f _u	0.1	1	2	3	4	Min.@ 1GHz	0.1 GHz	0.5 GHz	1.0 GHz	Min.@ 0.1GHz	Input (no dmg.)	Typ. GHz	0.1 GHz	0.5 GHz	1.0 GHz			mA	mW	Typ	Min	Max	Typ	Min	Max	
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

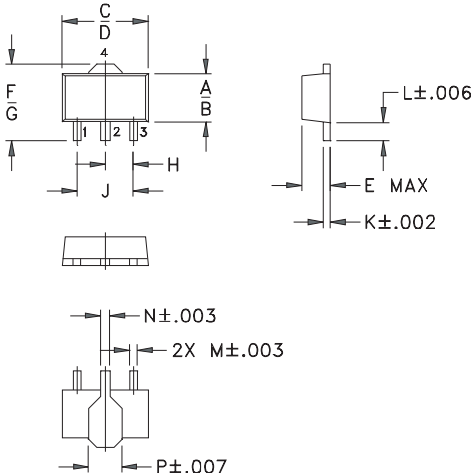
Operating Temperature -45°C to 85°C
 Storage Temperature -65°C to 150°C

Model Identification

Model GALI-74 Marking[†] 74

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

Outline Drawing (DF782)



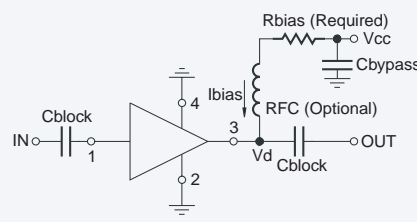
Outline Dimensions (inch mm)

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

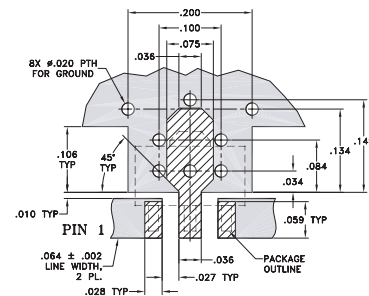
Typical Biasing Configuration



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 .050" ± .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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