HG Semiconductors

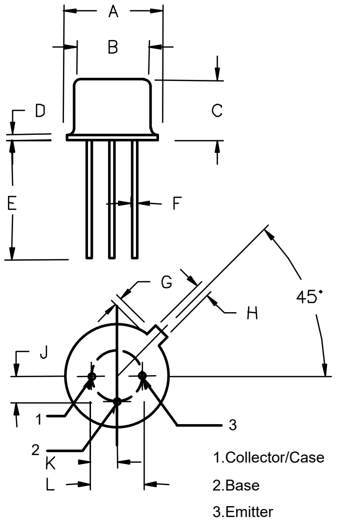
HG RF POWER TRANSISTOR

2N5109

ROHS Compliance,Silicon NPN POWER TRANSISTOR

DESCRIPTION

A silicon NPN transistor, designed for VHF and UHF equipment. Applications include amplifier,pre-driver, driver, and output stages.



FEATURES

- Silicon NPN,TO-39 packaged VHF/UHF Transistor
- Ft=1.2 Ghz (typ) @ 200MHz, V_{CE}=15V, I_C=50mA
- Max Unilateral Gain=12dB(typ) @ 200MHz

DIMENSIONS

UNIT	A	B	C	D	E	F	G	H	J	K	L
mm	9.40	8.51	6.60	1.14	12.70	0.48	1.02	0.86	2.67	2.67	5.33
	8.89	8.00	6.10	0.38		0.41	0.74	0.71	2.41	2.41	4.83
inches	0.370	0.335	0.260	0.045	0.500	0.019	0.040	0.034	0.105	0.105	0.210
	0.350	0.315	0.240	0.015		0.016	0.029	0.028	0.095	0.095	0.190

MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	RATINGS	UNITS
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	20	V
Collector Current	I_C	400	mA
Emitter-Base Voltage	V_{EBO}	3	V
Collector Power Dissipation	P_{DISS}	2.5	W
Junction Temperature	T_J	-65 to 175	°C
Storage Temperature Range	T_{STG}	-65 to 175	°C

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=5mA,I_B=0	20	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CBR}$	I_C=5mA,RBE=10ohm	40	-	-	V
Collector Cutoff Current	I_{CEO}	V_{CE}=15V, I_E=0	-	-	20	uA
Emitter Cutoff Current	I_{EBO}	V_{EB}=3V, I_E=0	-	-	100	uA
DC Current Gain	h_{FE1}	V_{CE}=15V,I_C=50mA	25	-	200	
DC Current Gain	h_{FE2}	V_{CE}=5V,I_C=360mA	5	-	-	
Current-Gain Bandwidth Product	f_T	f=200MHz,I_C=50mA V_{CE}=15V	-	1.2	-	GHz
Max Unilateral Gain	G_{UMAX}	V_{CE}=15V,f=200MHz, I_C=50mA	-	12	-	dB

Note : Above parameters , ratings , limits and conditions are subject to change.

Sep. 1998