

SILICON BIPOLAR NPN RF POWER TRANSISTOR

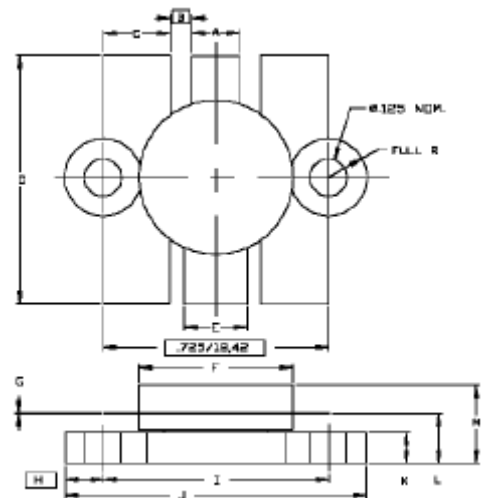
The silicon bipolar n-p-n transistor.
Common Emitter from 136 to 175 MHz Applications

Features:

- Gold metallization with barrier realizes very stable characteristics and excellent lifetime
- Diffused emitter ballast resistors
- Internal Input Matching
- Output power: 125 W
- Power gain: 9,2 dB

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector-base Voltage	V_{CB0}	65	V_{DC}
Emitter-Base Voltage	V_{EBO}	4.0	V_{DC}
Collector Current	I_C	20	A
Operation Junction Temperature	T_j	+200	$^{\circ}C$
Power Dissipation	P_{DISS}	270	W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.65	$^{\circ}C/W$
Storage Temperature Range	T_{STG}	+150	$^{\circ}C$



SGS-THOMSON MICROELECTRONICS		CONT'D			
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.150/3.81	.160/4.06	K	.095/2.41	.105/2.67
J		.045/1.14	L	.160/4.06	.180/4.58
C	.020/0.51	.025/0.64	M		.080/2.04
D	.035/0.91	.045/1.14			
E	.200/5.08	.210/5.33			
F	.498/12.45	.510/12.95			
G	.002/0.05	.007/0.18			
H		.125/3.18			
I	.725/18.29	.730/18.54			
J	.975/24.64	.980/24.89			

Parameters

Parameter	Symbol	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage ($I_C = 40 \text{ mA}_{DC}$, $V_{BE} = 0$)	$V_{(BR)CES}$	65	—	—	V_{DC}
Collector–Emitter Breakdown Voltage ($I_C = 40 \text{ mA}_{DC}$, $I_B = 0$)	$V_{(BR)CEO}$	35	—	—	V_{DC}
Collector–Base Breakdown Voltage ($I_C = 40 \text{ mA}_{DC}$, $I_E = 0$)	$V_{(BR)CBO}$	65	—	—	V_{DC}
Emitter–Base Breakdown Voltage ($I_E = 10 \text{ mA}_{DC}$, $I_C = 0$)	$V_{(BR)EBO}$	4.0	—	—	V_{DC}
Collector– Emitter Cutoff Current ($V_{CB} = 30 \text{ V}_{DC}$, $I_E = 0$)	I_{CES}	—	—	15.0	mA_{DC}
Output Capacitance ($V_{CB} = 28 \text{ Vdc}$, $I_E = 0$, $f = 1.0 \text{ MHz}$)	C_{OB}	—	—	250	pF
Power Gain ($V_{CE} = 28 \text{ V}$, $P_{OUT} = 125 \text{ W}$, $f = 175 \text{ MHz}$)	G_p	9.2	—	—	dB
Collector Efficiency ($V_{CE} = 28 \text{ V}$, $P_{OUT} = 125 \text{ W}$, $f = 175 \text{ MHz}$)	η	55	—	—	%

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Specification is subject to change without notice