

SILICON NPN MICROWAVE POWER TRANSISTOR 0.5 W, in the 470 – 860 MHz Range

The silicon n-p-n transistor is designed for Class A Television Band IV- V Amplifier Applications Requiring High Linearity.

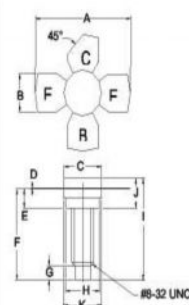
Features:

- Power Gain: 6 dB Min at 860 MHz
- Output Power: 0.5 W
- IMD₃: -60 dB Max at P_{REF} = 0.5 W

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector-Emitter Voltage	V _{CEO}	24	V _{DC}
Collector-Base Voltage	V _{CBO}	45	V _{DC}
Collector Current	I _C	1	A _{DC}
Operation Junction Temperature	T _j	-65 ÷ +200	°C
Storage Temperature Range	T _{STG}	-65 ÷ +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	11	°C/W
Total Power Dissipation, T _C = 25°C	P _D	16	W

PACKAGE STYLE .280 4L STUD



DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	1.010 / 25.65	1.055 / 26.80
B	.220 / 5.59	.230 / 5.84
C	.270 / 6.86	.285 / 7.24
D	.003 / 0.08	.007 / 0.18
E	.117 / 2.97	.137 / 3.48
F		.572 / 14.53
G		.130 / 3.30
H	.245 / 6.22	.255 / 6.48
I		.640 / 16.26
J	.175 / 4.45	.217 / 5.51
K	.275 / 6.99	.285 / 7.24

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (I _C = 40 mA, V _{BE} = 0 V)	V _{(BR)CEO}	24	—	—	V _{DC}
Collector–Base Breakdown Voltage (I _C = 2 mA)	V _{(BR)CBO}	45			V _{DC}
Emitter–Base Breakdown Voltage (I _E = 0.5 mA, I _C = 0 A)	V _{(BR)EBO}	3.5	—	—	V _{DC}
DC Current Gain (V _{CE} = 20 V, I _C = 250 mA)	h _{FE}	20	—	100	
Output Capacitance (V _{CB} = 20 V, I _E = 0 A, f = 1 MHz)	C _{OB}	—	—	10	pF
Power Gain (V _{CE} = 25 V, I _C = 250 mA, f = 860 MHz, P _{OUT} = 0.5 W, Vision = -8 dB, Sound = -7 dB, Chroma = -16 dB)	G _p	6	—	—	dB
Two-Tone Third-Order Intermodulation Distortion (V _{CE} = 25 V, I _C = 250 mA, f = 860 MHz, P _{OUT} = 0.5 W, Vision = -8 dB, Sound = -7 dB, Chroma = -16 dB)	IMD ₃	—	—	-60	dB

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Specification is subject to change without notice