SYNTEZ
MICROELECTRONICS

SD1490

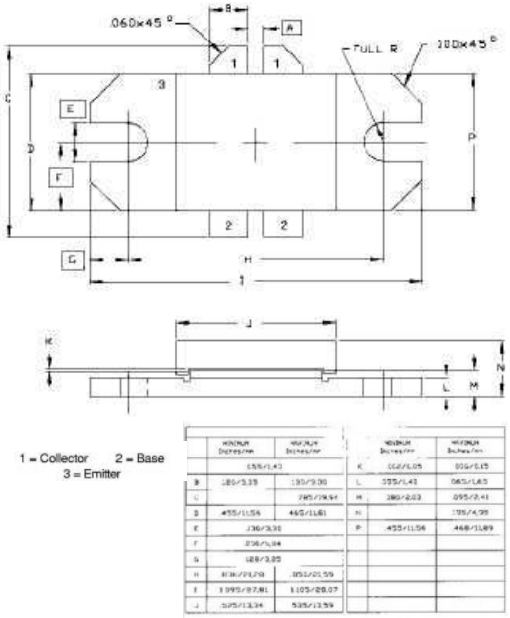
SILICON NPN MICROWAVE POWER TRANSISTOR
25 W, in the 470 – 860 MHz Range

The silicon n-p-n transistor is designed for Class A High Linearity Amplifier Applications in TV Band IV&V Transmitters.

Features:

- Power Gain: 8 dB Min
- Output Power: 25 W
- IMD_3: -45 dBc Max

PACKAGE STYLE .450 BAL FLG.(A)



Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector-Emitter Voltage	V_{CEO}	30	V_{DC}
Collector-Base Voltage	V_{CBO}	45	V_{DC}
Collector Current	I_C	8	A_{DC}
Operation Junction Temperature	T_j	-55 ÷ +200	ºC
Storage Temperature Range	T_{STG}	-55 ÷ +150	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.15	°C/W
Total Power Dissipation, T_C = 25ºC	P_D	155	W

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (I_C = 200 mA, V_{BE} =0 V)	$V_{(BR)CEO}$	30	—	—	V_{DC}
Collector–Base Breakdown Voltage (I_C = 50 mA)	$V_{(BR)CBO}$	45	—	—	V_{DC}
Emitter–Base Breakdown Voltage (I_E = 10 mA, I_C = 0 A)	$V_{(BR)EBO}$	3	—	—	V_{DC}
Collector–Base Leakage Current (V_{CB} = 20 V)	I_{CBO}	—	—	10	mA
DC Current Gain (V_{CE} = 5 V, I_C = 3 A)	h_{FE}	10	—	100	
Output Capacitance (V_{CB} = 28 V, I_E = 0 A, f = 1 MHz)	C_{OB}	—	72	—	pF
Power Gain (V_{CE} = 26.5 V, I_C = 2x1.6 A, f = 860 MHz, P_{OUT} = 25 W)	Gp	8	—	—	dB
Two-Tone Third-Order Intermodulation Distortion (V_{CE} = 26.5 V, P_{OUT} = 25 W, f = 860 MHz, Vision = -8 dB, Sound = -10 dB, Chroma = -16 dB)	IMD_3	—	—	-45	dBc

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