TPV595

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

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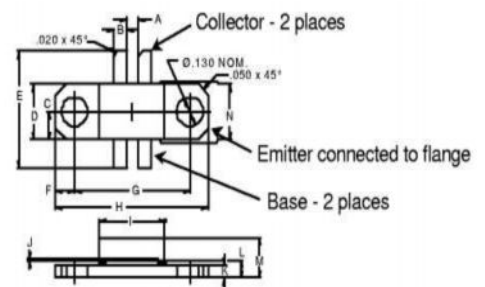The silicon n-p-n transistor is designed for Class AB Push Pull, Common Emitter from 470 to 860 MHz Applications.

Features:
- Power Gain: 8.5 dB Min
- Output Power: 14 W
- IMD_3: -47 dB Max

Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector–Emitter Voltage	V_{CEO}	25	V_{DC}
Collector–Base Voltage	V_{CBO}	45	V_{DC}
Collector Current	I_C	2x2.6	A_{DC}
Operation Junction Temperature	T_j	-50 ÷ +200	ºC
Storage Temperature Range	T_{STG}	-50 ÷ +150	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.5	°C/W
Total Power Dissipation, T_C = 25ºC	P_D	65	W

PACKAGE STYLE .250 BAL FLG

DIM	MINIMUM inches / mm	MAXIMUM inches / mm
A	.060 / 1.52	
B	.055 / 1.40	.065 / 1.65
C	.125 / 3.18	
D	.243 / 6.17	.255 / 6.48
E	.630 / 16.00	.670 / 17.01
F	.092 / 2.34	
G	.555 / 14.10	.565 / 14.35
H	.739 / 18.77	.750 / 19.05
I	.315 / 8.00	.327 / 8.31
J	.002 / 0.05	.006 / 0.15
K	.055 / 1.40	.065 / 1.65
L	.075 1.91	.095 / 2.41
M		.190 / 4.83
N	.245 / 6.22	.257 / 6.53

Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (I_C = 40 mA, V_{BE} =0 V)	$V_{(BR)CEO}$	25	—	—	V_{DC}
Collector –Base Breakdown Voltage (I_C = 20 mA, I_C = 0 A)	$V_{(BR)CBO}$	45	—	—	V_{DC}
Emitter–Base Breakdown Voltage (I_E = 5 mA, I_C = 0)	$V_{(BR)EBO}$	3	—	—	V_{DC}
Collector–Base Leakage Current (V_{CB} = 20 V)	I_{CBO}	—	—	5	mA
DC Current Gain (V_{CE} = 20 V, I_C = 500 mA)	h_{FE}	10	—	100	
Output Capacitance (V_{CB} = 25 V, I_E = 0 A, f = 1 MHz)	C_{OB}	—	—	20	pF
Power Gain (V_{CE} = 25 V, I_C = 2x900 mA, f = 860 MHz, P_{OUT} = 14 W)	Gp	8.5	—	—	dB
Two-Tone Third-Order Intermodulation Distortion (V_{CE} = 25 V, I_C = 2x900 mA, f = 860 MHz, P_{OUT} = 14 W, Vision = -8 dB, Sound = -7 dB, SB = -16 dB)	IMD_3	—	—	-47	dB

Specification is subject to change without notice