



# **VHF-Band Power Amplifier Applications**

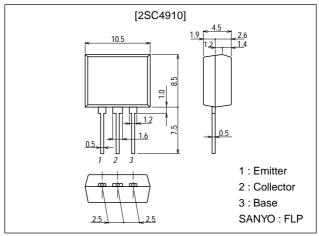
#### **Features**

· On-chip emitter ballast resistors.

# **Package Dimensions**

unit:mm

2084B



## **Specifications**

### Absolute Maximum Ratings at Ta = 25°C

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Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CBO</sub>		38	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		18	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		3	V
Collector Current	Ic		0.75	А
Collector Current (Pulse)	I <sub>CP</sub>		1.2	Α
Base Current	I <sub>B</sub>		150	mA
Collector Dissipation	PC		1.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

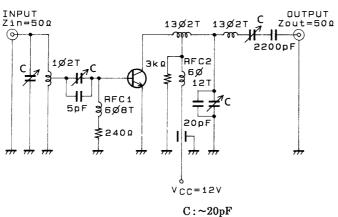
#### Electrical Characteristics at Ta = 25°C

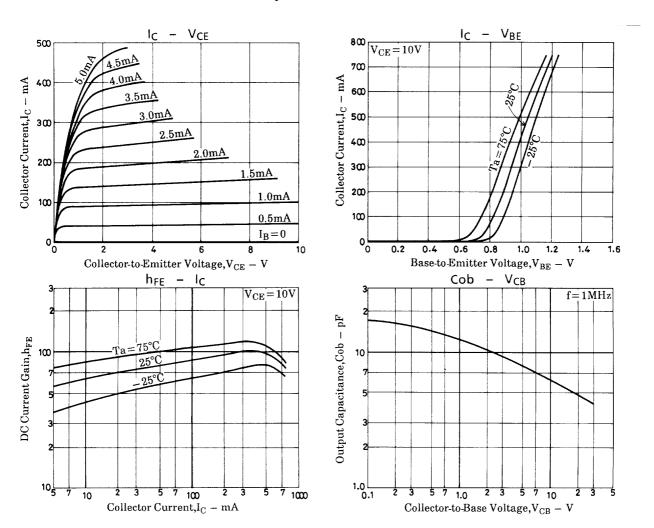
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oill
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =30V, I <sub>E</sub> =0			50	μΑ
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =2V, I <sub>C</sub> =0			50	μA
DC Current Gain	hFE	V <sub>CE</sub> =10V, I <sub>C</sub> =200mA	20		200	
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =100μA, I <sub>E</sub> =0	38			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	18			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	3			V

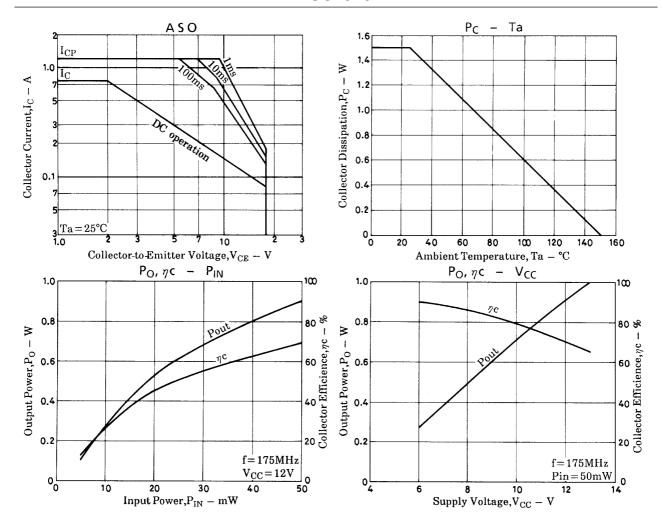
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Output Capacitance	Cob	V <sub>CB</sub> =10V, f=1MHz		6	10	pF
Output Power	PO	V <sub>CC</sub> =12V, f=175MHz, P <sub>IN</sub> =50mW	0.7	0.9		W
Collector Efficiency	ης	See specified Test Circuit.	55	70		%

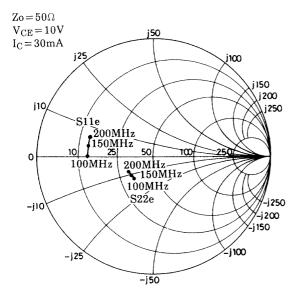
## **Collector Efficiency Test Circuit**







### S parameter



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