2SC2988

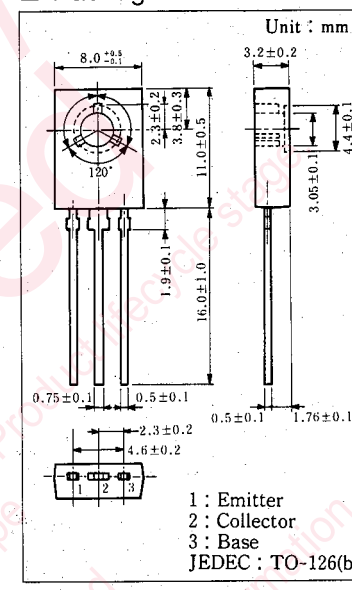
Silicon NPN Epitaxial Planar Type

RF Power Amplifier

■ Features

- Power output 1.8W on VHF band (f=175MHz)
- High gain 10dB

■ Package Dimensions



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	36	V
Collector-emitter voltage	V_{CEO}	16	V
Emitter-base voltage	V_{EBO}	3	V
Peak collector current	I_{CP}	1	A
Collector current	I_C	0.5	A
Collector power dissipation (Tc=25°C)	P_C	5	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55～+150	°C

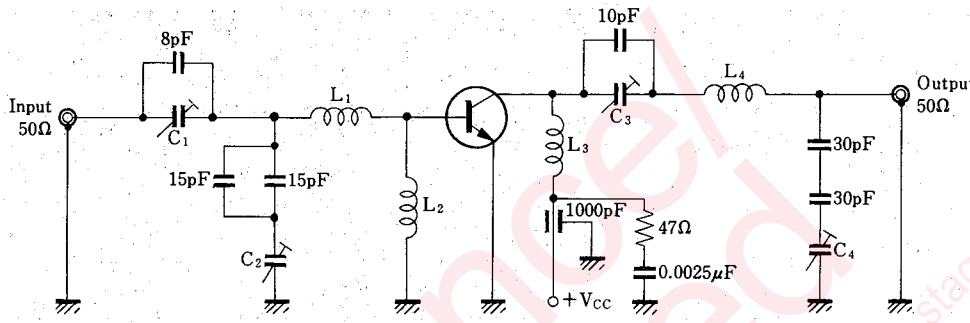
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	V_{CB}=20V, I_E=0			10	μA
Emitter cutoff current	h_{FE}	V_{CE}=13.5V, I_C=200mA*	20	50		
Transition frequency	f_T	V_{CB}=10V, I_E=−100mA*, f=200MHz	600	1000		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		6	10	pF
Overall efficiency characteristics	P_O	V_{CC}=13.5V, P_{in}=0.2W, f=175MHz	1.8	2.2		W
Output power	ηc	V_{CC}=13.5V, P_{in}=0.2W, f=175MHz		50		%

*パルス測定

Maintenance/Discontinued
Discontinued
Please visit following four Product lifecycle stage
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discontinued type
following URL for latest information
http://www.semicon.panasonic.co.jp/

Measurement circuit for output power

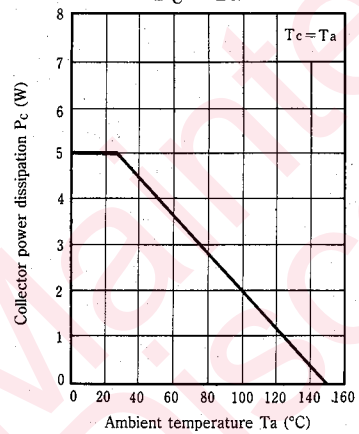


Circuit Constant

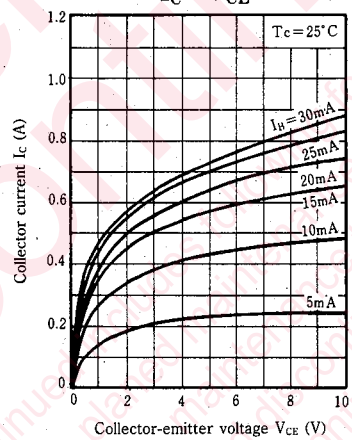
C_1 : 40pF
C_2 : 30pF
C_3 : 30pF
C_4 : 30pF

L_1 : Ag/Cu, 2mmϕ, L=18mm
L_2 : Ag/Cu, 1mmϕ, 7.5t, ID=8mm
L_3 : Ag/Cu, 1mmϕ, 1.5t, ID=7.5mm
L_4 : Ag/Cu, 1.5mmϕ, 2t+10mm×2, ID=11mm, Pitch 5

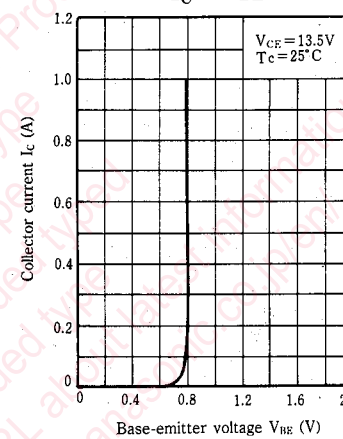
P_C – Ta



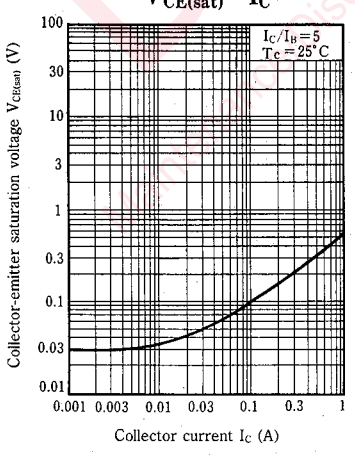
I_C – V_{CE}



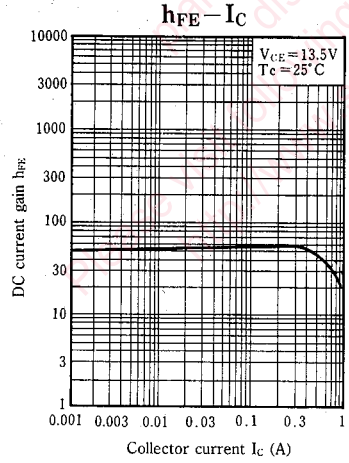
I_C – V_{BE}



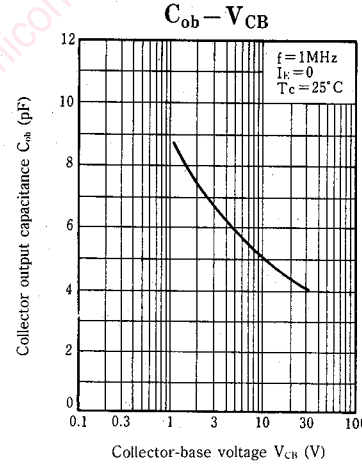
$V_{CE(sat)}$ – I_C



h_{FE} – I_C

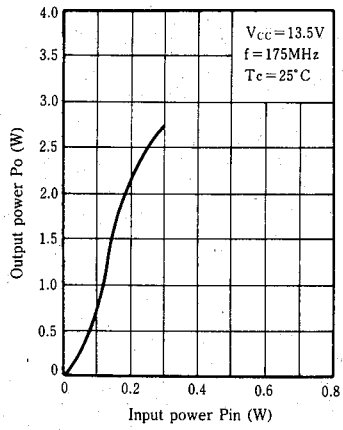


C_{ob} – V_{CB}

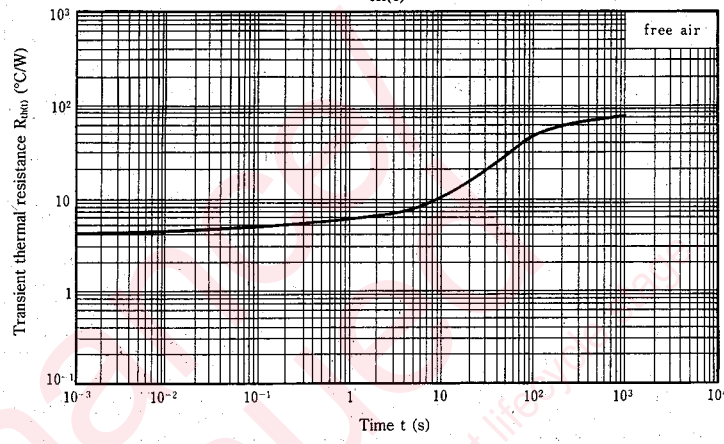


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$P_O - P_{in}$



$R_{th(t)} - t$



Maintenance/Discontinued
Discontinued includes following four Product life
planed maintenance type
maintenance type
planed discontinued type
discontinued type
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