
2SC3867

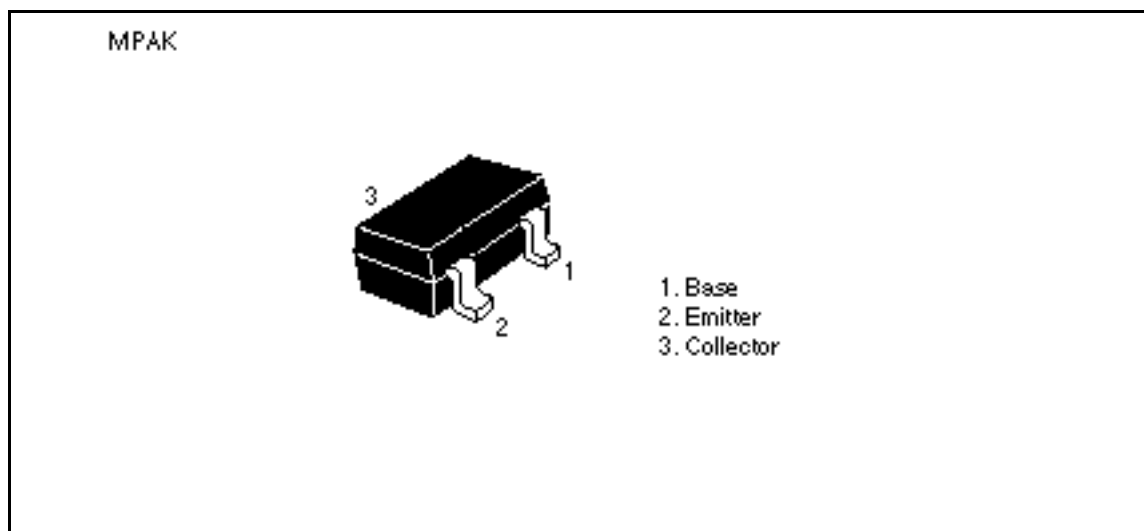
Silicon NPN Epitaxial

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Application

- Σ UHF frequency converter
- Σ Wide band amplifier

Outline



Absolute Maximum Ratings (Ta = 25°C)

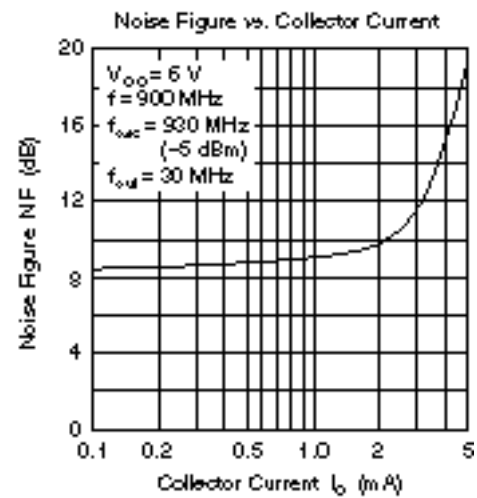
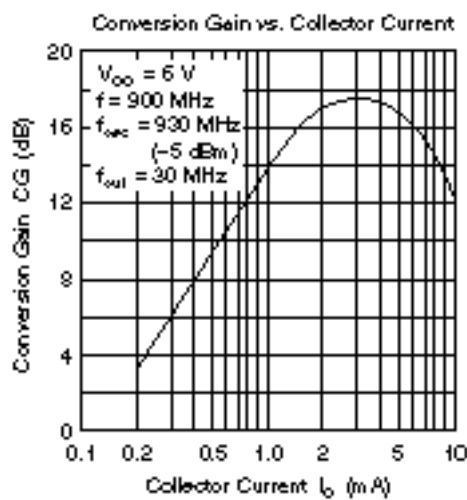
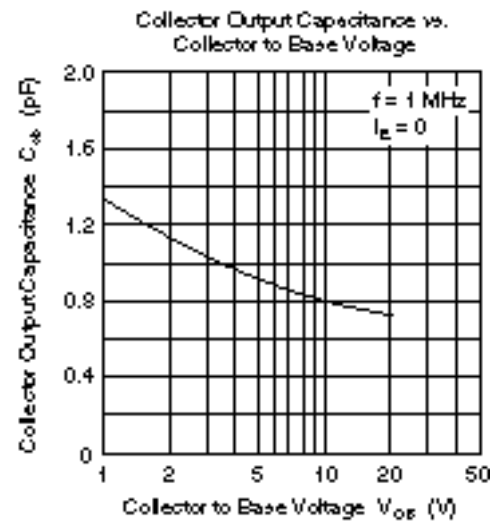
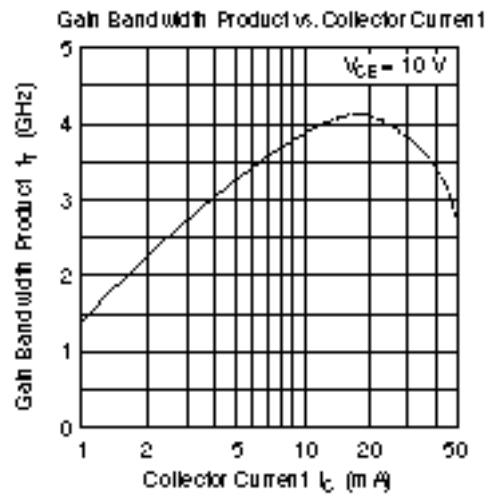
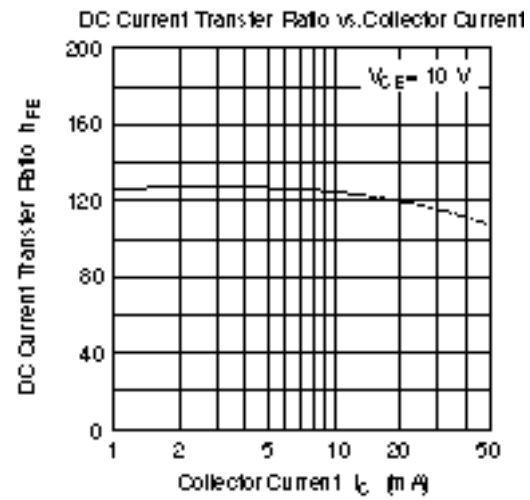
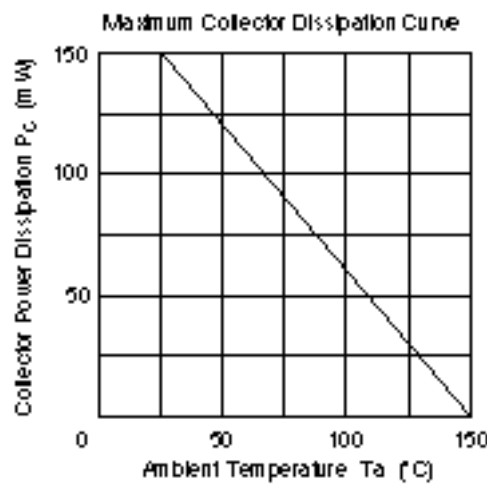
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	11	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

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Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	20	—	—	V	$I_C = 10\ \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	11	—	—	V	$I_C = 1\ mA, R_{BE} = \bullet$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	3	—	—	V	$I_E = 10\ \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 15\ V, I_E = 0$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.7	V	$I_C = 10\ mA, I_B = 5\ mA$
DC current transfer ratio	h_{FE}	45	—	200		$V_{CE} = 10\ V, I_C = 5\ mA$
Gain bandwidth product	f_T	2.5	3.8	—	GHz	$V_{CE} = 10\ V, I_C = 10\ mA$
Collector output capacitance	C_{ob}	—	0.8	1.5	pF	$V_{CB} = 10\ V, I_E = 0, f = 1\ MHz$
Conversion gain	CG	10	14	—	dB	$V_{CC} = 10\ V, I_C = 1\ mA, f = 900\ MHz,$
Noise figure	NF	—	10	14	dB	$f_{osc} = 930\ MHz, (-5dBm), f_{out} = 30\ MHz$

Note: Marking is "DI—"



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