

Features

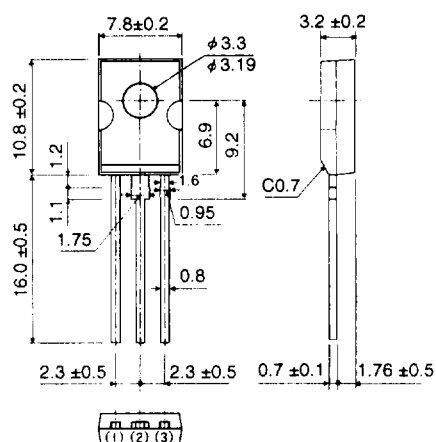
- available in TO-126FP package
- high dc current gain (h_{FE})
- low collector saturation voltage, typically $V_{CE(sat)} = 0.2$ V at $I_C/I_B = 50$ mA/5 mA

Applications

- high gain amplifier

Dimensions (Units : mm)

2SC4137 (TO-126FP)



(1) Emitter
(2) Collector
(3) Base

Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

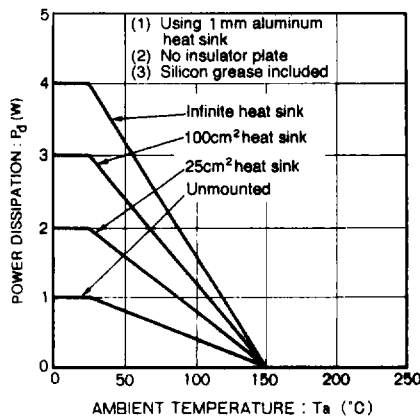
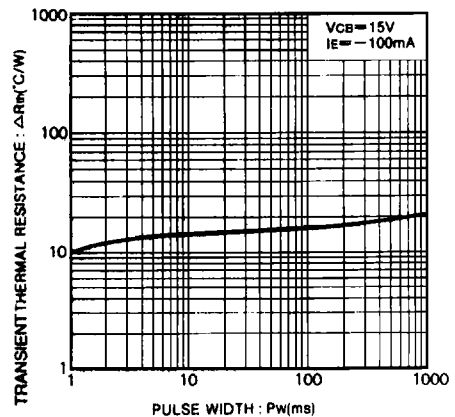
Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	V_{CBO}	25	V	
Collector-to-emitter voltage	V_{CEO}	20	V	
Emitter-to-base voltage	V_{EBO}	6	V	
Collector current	I_C	100	mA	Continuous (dc)
		200	mA	Single pulse, $P_W = 10$ ms
Collector dissipation	P_C	1	W	$T_a = 25^\circ\text{C}$
		4	W	$T_C = 25^\circ\text{C}$
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$	

Electrical characteristics (unless otherwise noted, $T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	BV_{CBO}	25			V	$I_C = 10\ \mu\text{A}$
Collector-to-emitter breakdown voltage	BV_{CEO}	20			V	$I_C = 1\ \text{mA}$
Emitter-to-base breakdown voltage	BV_{EBO}	6			V	$I_E = 10\ \mu\text{A}$
Collector cutoff current	I_{CBO}			0.5	μA	$V_{CB} = 15\ \text{V}$
Emitter cutoff current	I_{EBO}			0.5	μA	$V_{EB} = 6\ \text{V}$
DC current gain	h_{FE}	560		2700		$V_{CE} = 3\ \text{V}$, $I_C = 10\ \text{mA}$
Collector-to-emitter saturation voltage	$V_{CE(sat)}$		0.2	0.7	V	$I_C/I_B = 50\ \text{mA}/5\ \text{mA}$
Transition frequency	f_T		400		MHz	$V_{CE} = 10\ \text{V}$, $I_E = -10\ \text{mA}$, $f = 100\ \text{MHz}$
Output capacitance	C_{ob}		3.0		pF	$V_{CB} = 10\ \text{V}$, $I_E = 0\ \text{A}$, $f = 1\ \text{MHz}$

 h_{FE} rankings

Item	U	V	W
h_{FE}	560 ~ 1200	820 ~ 1800	1200 ~ 2700

Electrical characteristic curves**Figure 1****Figure 2**

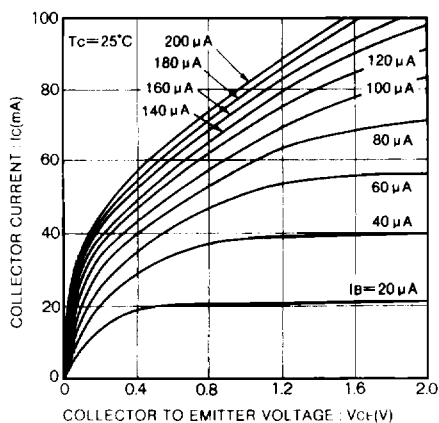


Figure 3

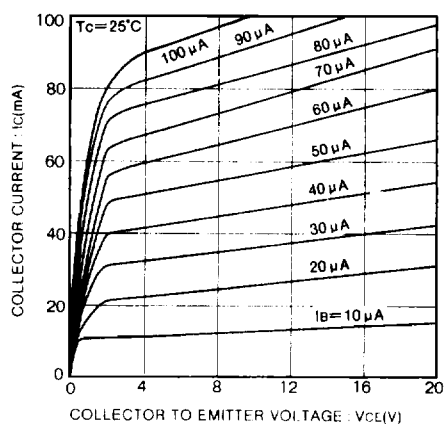


Figure 4

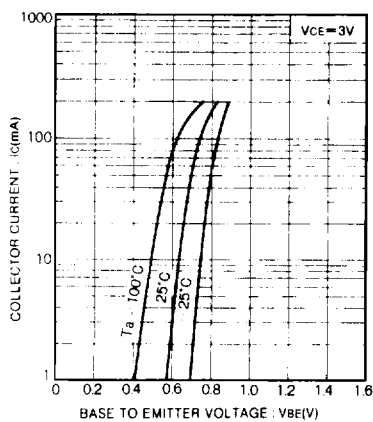


Figure 5

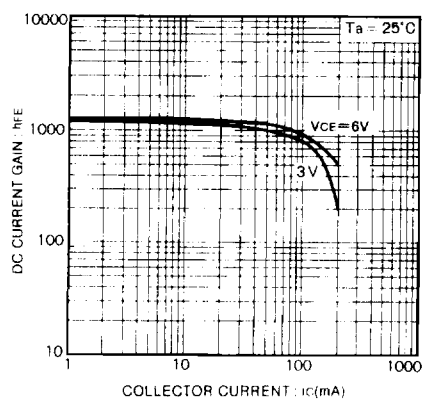


Figure 6

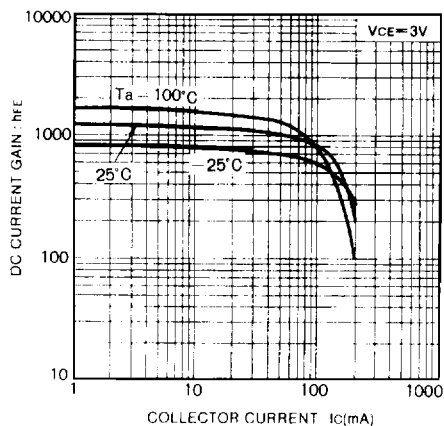


Figure 7

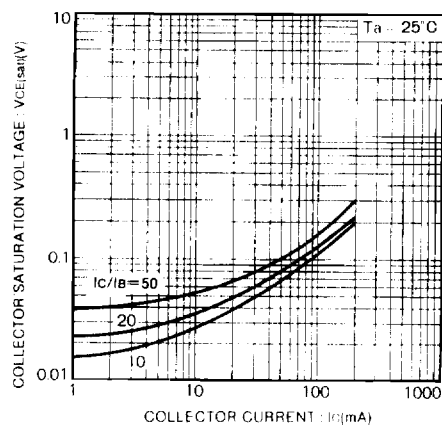
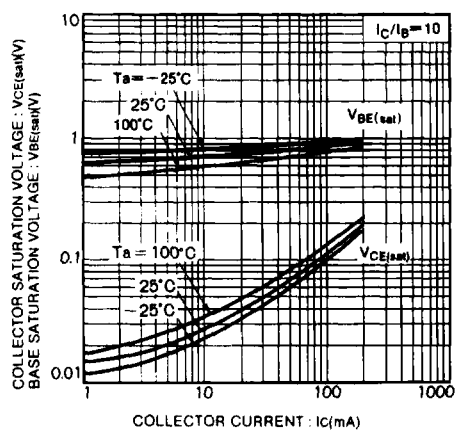
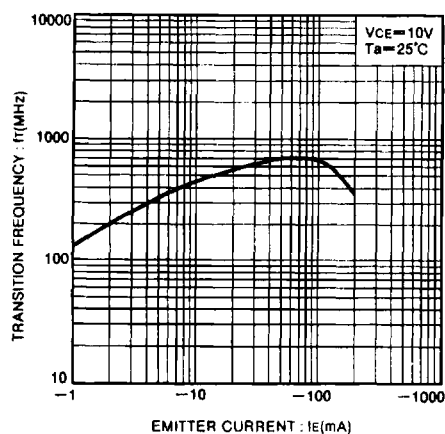
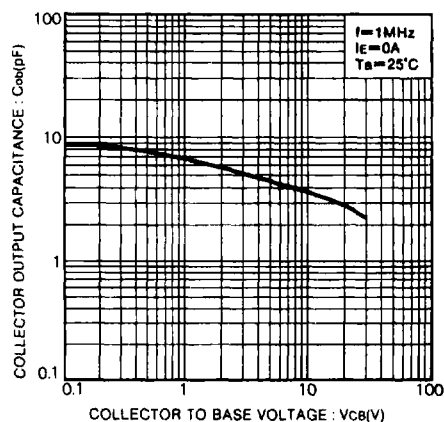
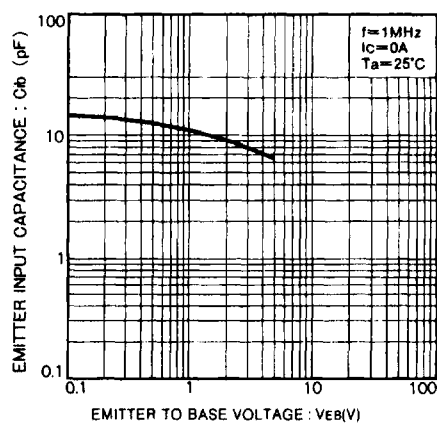


Figure 8

**Figure 9****Figure 10****Figure 11****Figure 12****Ordering information**

Package	Bulk
Code	
Basic order quantity	500
2SC4137	★
★ = Standard, ☆ = Semi-standard, * = Special order	