HFZT

S9014

TO-92 Plastic-Encapsulate Transistors

FEATURES

- Collector Current:Ic=0.1A
- TRANSISTOR(NPN)
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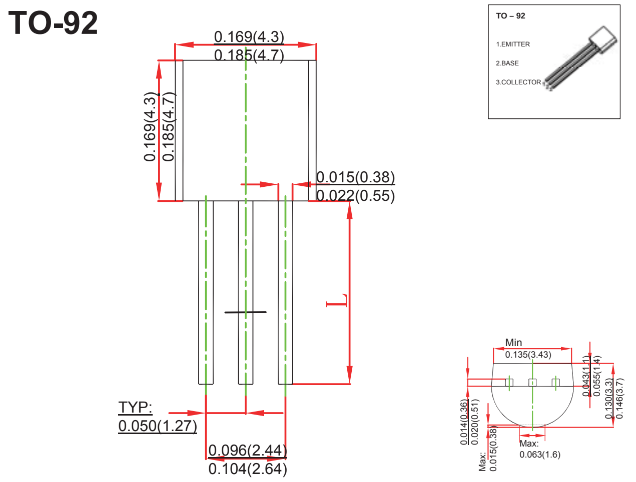
MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.1	A
P_D	Collector Power Dissipation	450	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	277.7	℃ /W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS T_a=25℃ unless otherwise specified

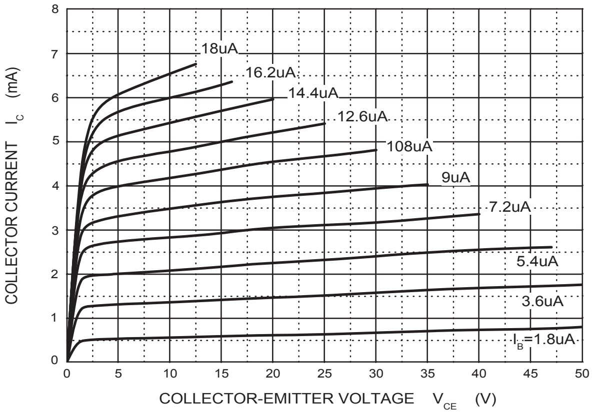
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 1mA, I_B=0	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=50V, I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=35V, I_B=0			1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V, I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=5V, I_C= 1mA	60		1000	
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=100mA, I_B= 5mA			0.3	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=100mA, I_B= 5mA			1	V
Transition frequency	f_T	V_{CE}=5V, I_C= 10mA f=30MHz	150			MHz

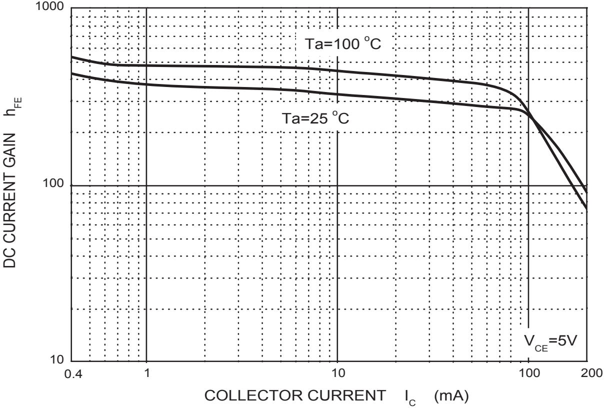
CLASSIFICATION OF $h_{FE(1)}$

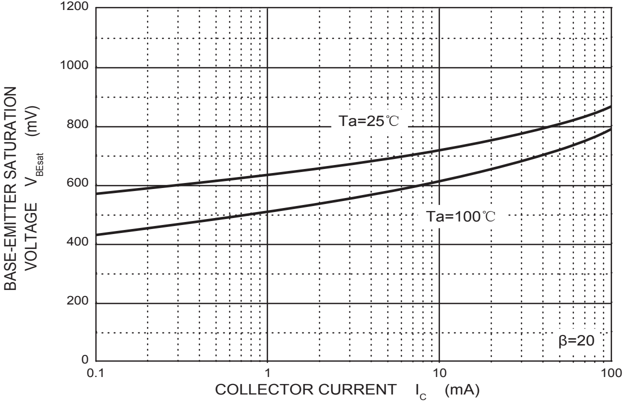
Rank	A	B	C	D
Range	60-150	100-300	200-600	400-1000

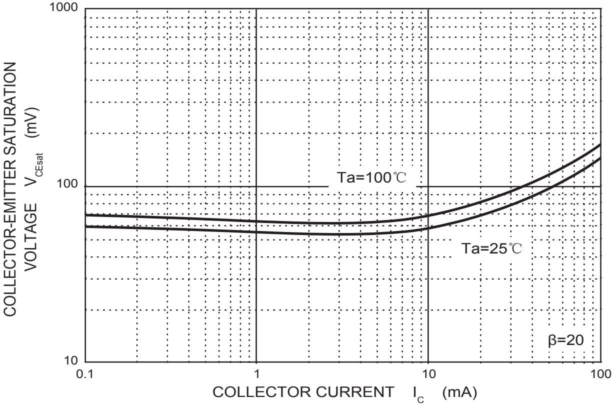
RATINGS AND CHARACTERISTIC CURVES

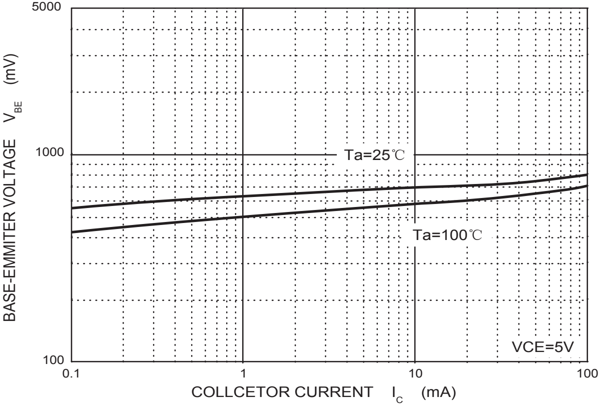
Typical Characterisitics

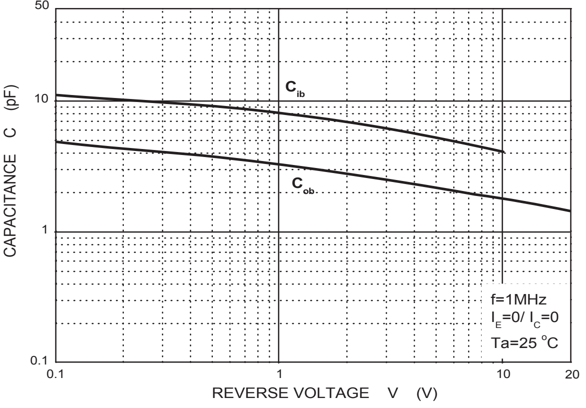

Static Characteristic

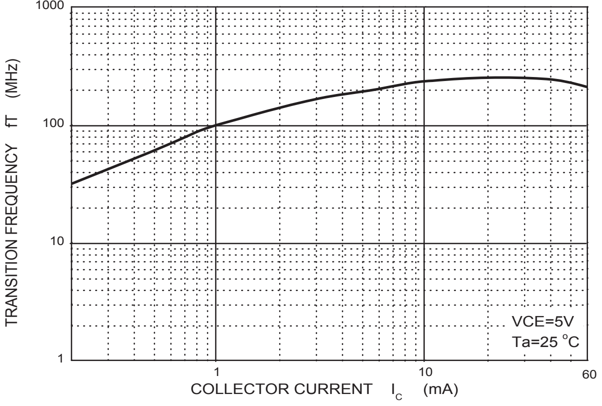

h_{FE} —— I_C

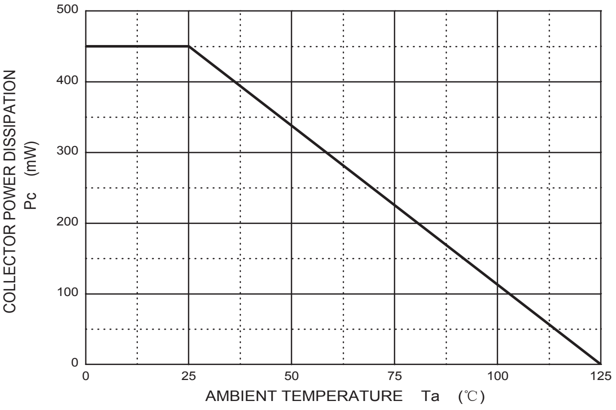

V_{BEsat} —— I_C


V_{CEsat} —— I_C


V_{BE} —— I_C


C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}


fT —— I_C


Pc —— Ta