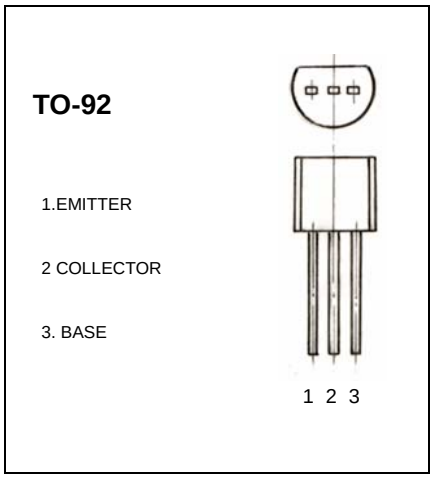
TIGER ELECTRONIC CO.,LTD

TO-92 Plastic-Encapsulate Transistors

2SC1674 TRANSISTOR (NPN)



FEATURES

- High current gain bandwidth product f_T=600MHz(Typ.),
- High power gain G_{PE}=22dB at f=100MHz

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current	20	mA
P_C	Collector Power dissipation	250	mW
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 100μA, I_E=0	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 1mA, I_B=0	20		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100μA,I_C=0	4		V
Collector cut-off current	I_{CBO}	V_{CB}= 30V, I_E=0		0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=3V, I_C=0		0.1	μA
DC current gain	h_{FE}	V_{CE}=6 V, I_C= 1mA	40	180	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA, I_B= 1mA		0.3	V
Base-emitter voltage	$V_{BE(ON)}$	V_{CE}=6V, I_C= 1mA	0.65	0.77	V
Transition frequency	f_T	V_{CE}=6 V, I_C= 1mA	400		MHz
Collector output capacitance	C_{ob}	V_{CE}=6V,I_E=0, f =1MHz		1.3	pF

CLASSIFICATION OF h_{FE}

Rank	Y	GR	BL
Range	40-80	60-120	90-180

Typical Characteristics 2SC1674

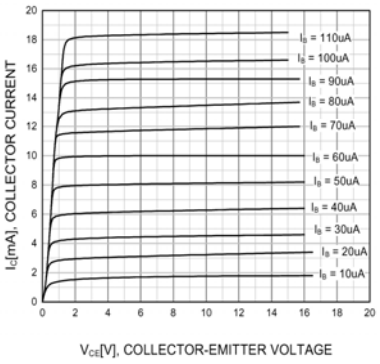


Figure 1. Static Characteristic

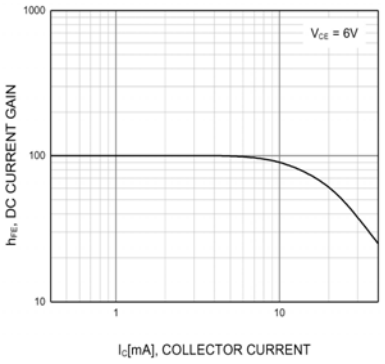


Figure 2. DC current Gain

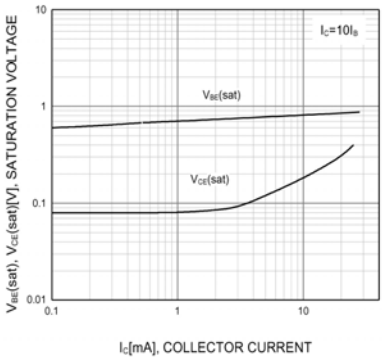


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

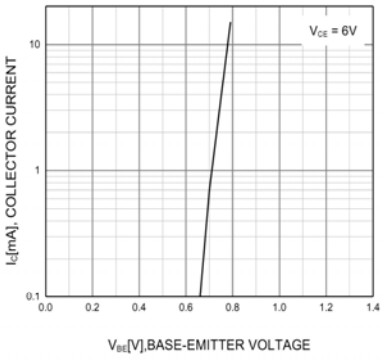


Figure 4. Base-Emitter On Voltage

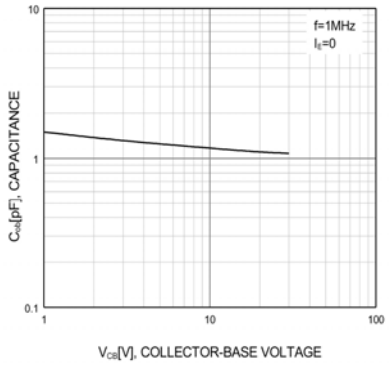


Figure 5. Collector Output Capacitance

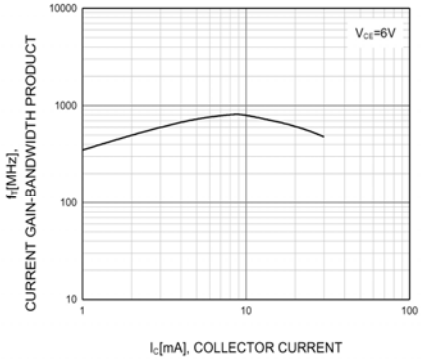


Figure 6. Current Gain Bandwidth Product