



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO.,LTD

TO-92 Plastic-Encapsulate Transistors

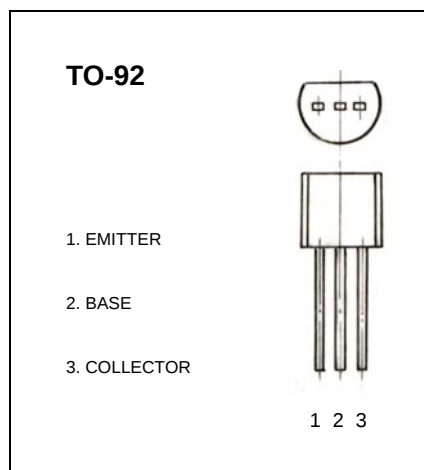
A44 TRANSISTOR (NPN)

FEATURES

- High voltage

MAXIMUM RATINGS* $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Dissipation	0.625	W
T_J, T_{stg}	Junction and Storage Temperature	-55 to +150	$^{\circ}\text{C}$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

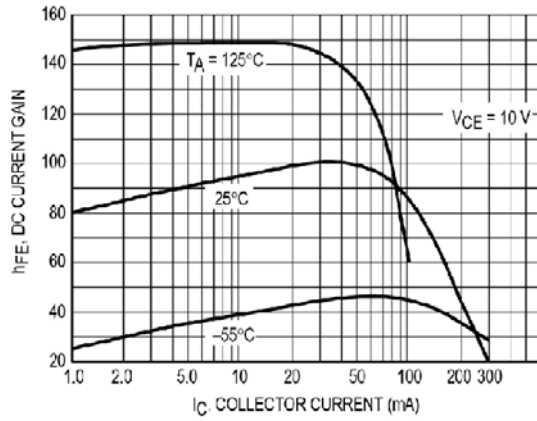
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C=100\mu\text{A}, I_E=0$	400			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C=1\text{ mA}, I_B=0$	400			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=400\text{ V}, I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=400\text{ V}$			5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{ V}, I_C=0$			0.1	μA
DC current gain	$H_{FE(1)}$	$V_{CE}=10\text{ V}, I_C=10\text{ mA}$	80		300	
	$H_{FE(2)}$	$V_{CE}=10\text{ V}, I_C=1\text{ mA}$	70			
	$H_{FE(3)}$	$V_{CE}=10\text{ V}, I_C=100\text{ mA}$	60			
	$H_{FE(4)}$	$V_{CE}=10\text{ V}, I_C=50\text{ mA}$	80			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{ mA}, I_B=1\text{ mA}$			0.2	V
	$V_{CE(sat)}$	$I_C=50\text{ mA}, I_B=5\text{ mA}$			0.3	V
Base-emitter sataration voltage	$V_{BE(sat)}$	$I_C=10\text{ mA}, I_B=1\text{ mA}$			0.75	V
Transition frequency	f_T	$V_{CE}=20\text{ V}, I_C=10\text{ mA}$ $f=30\text{ MHz}$	50			MHz

CLASSIFICATION OF $h_{FE(1)}$

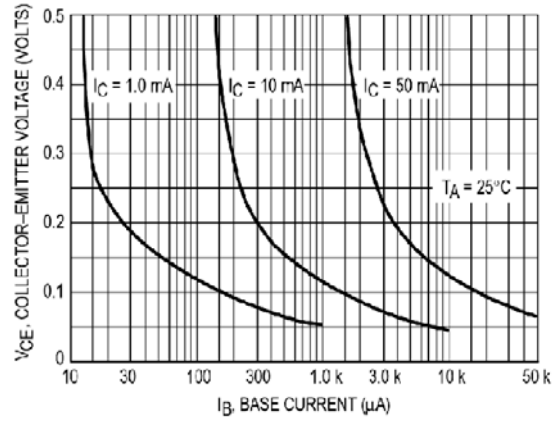
Rank	A	B1	B2	C
Range	80-100	100-150	150-200	200-300

Typical Characteristics

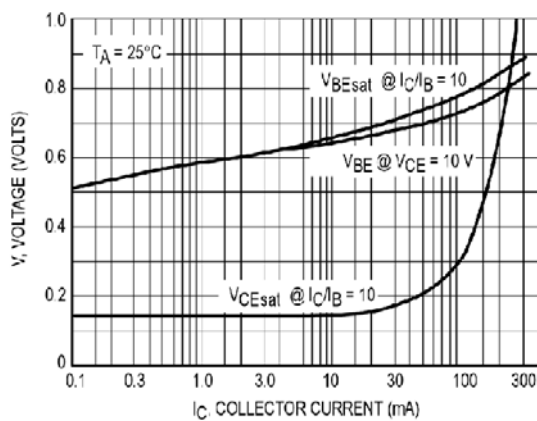
A44



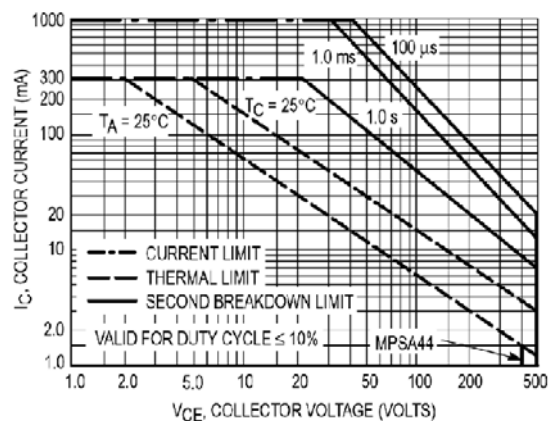
DC Current Gain



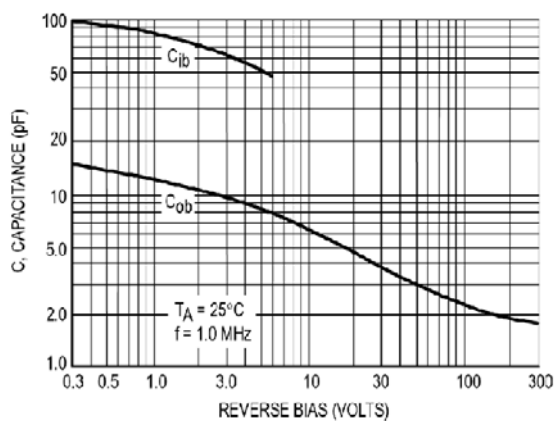
Collector Saturation Region



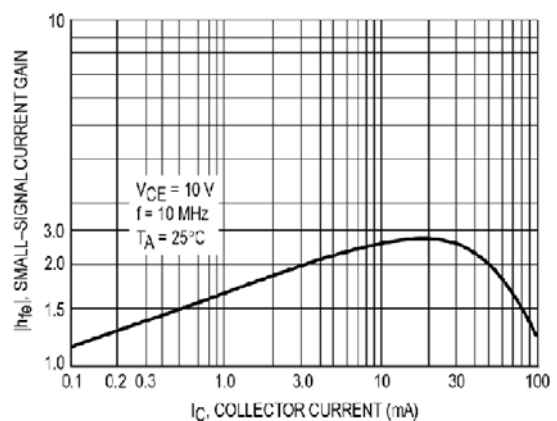
"On" Voltages



Active Region — Safe Operating Area



Capacitance



High Frequency Current Gain