TO-92 Plastic-Encapsulate Transistors

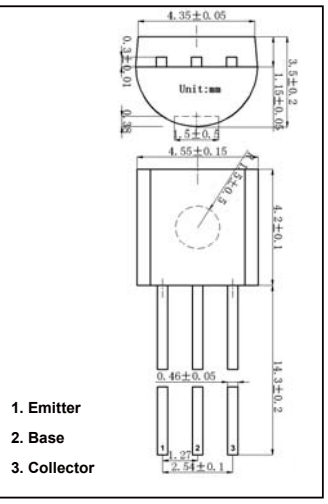
Features

- NPN Transistors
- High Voltage

MECHANICAL DATA

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

TO-92



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	310	V
V_{CEO}	Collector Emitter Voltage	305	V
V_{EBO}	Emitter Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	625	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	- 55 to +150	°C
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	200	°C/mW
$R_{\theta JC}$	Thermal Resistance, unction to Case	83.3	°C/mW

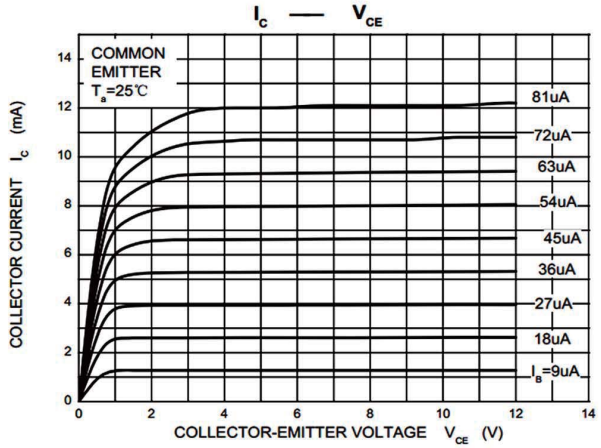
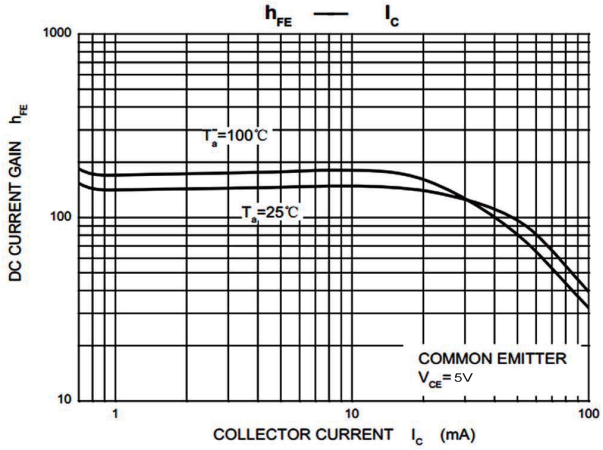
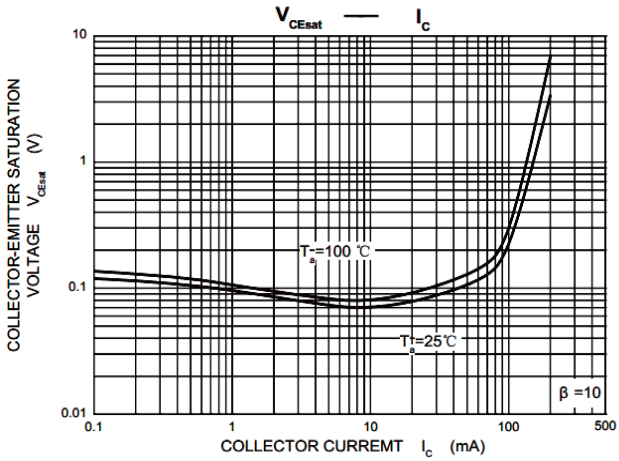
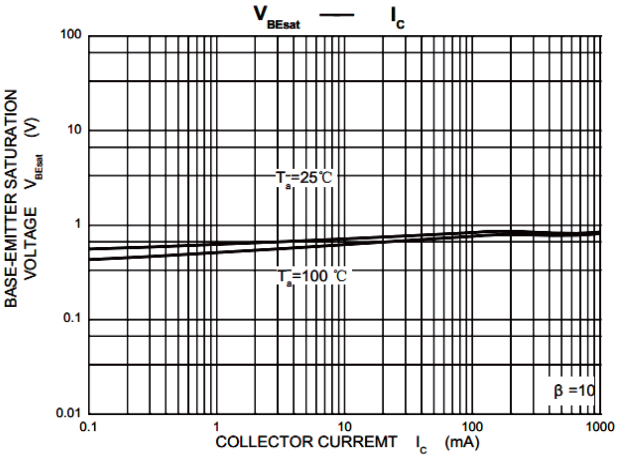
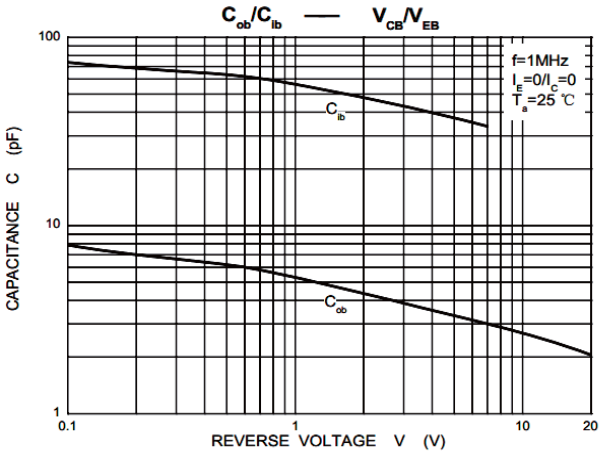
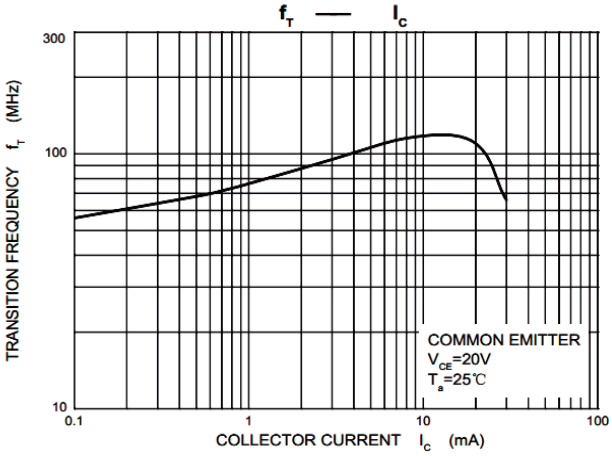
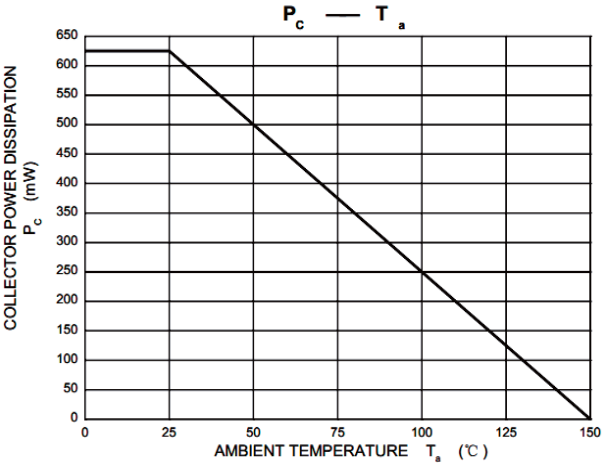
PACKAGE INFORMATION

Device	Package	Shipping
A42	TO-92	2000/Tape&Reel

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C = 100μA,I_E = 0	310			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C = 1mA,I_B = 0	305			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E = 100μA,I_C = 0	5			V
I_{CBO}	Collector cut-off current	V_{CB} = 200V,I_E = 0			0.25	μA
I_{EBO}	Emitter cut-off current	V_{EB} = 5V,I_C = 0			0.1	μA
$h_{FE(1)}$	DC current gain	V_{CE} = 5V, I_C = 1mA	80		200	
$h_{FE(2)}$		V_{CE} = 5V, I_C = 10mA	80			
$h_{FE(3)}$		V_{CE} = 10V, I_C = 1mA	60			
$h_{FE(4)}$		V_{CE} = 10V, I_C = 10mA	80		250	
$h_{FE(5)}$		V_{CE} = 10V, I_C = 30mA	75			
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C = 20mA,I_B = 2mA			0.2	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C = 20mA,I_B = 2mA			0.9	V
f_T	Transition frequency	V_{CE} = 20V, I_C = 10mA,f= 30MHz	50			MHz

Classification OF $h_{FE(1)}$

Rank	A1	A2	B
Range	80-100	100-150	150-200

RATINGS AND CHARACTERISTIC CURVES

■ Typical Characterisitics