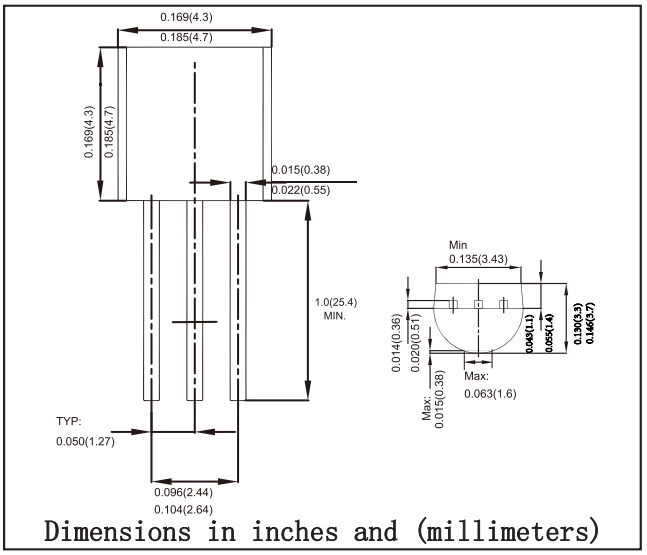
TO-92 Plastic-Encapsulate Transistors

FEATURES

- Low Current
- High Voltage
- TRANSISTOR (NPN)

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	200	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.2	A
P_C	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	200	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MPSA43	TO-92	Bulk	1000pcs/Bag
MPSA43-TA	TO-92	Tape	2000pcs/Box

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.1mA,I_E=0	200			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=1mA,I_B=0	200			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=0.1mA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=160V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$*	V_{CE}=10V, I_C=1mA	25			
	$h_{FE(2)}$*	V_{CE}=10V, I_C=10mA	40		200	
	$h_{FE(3)}$*	V_{CE}=10V, I_C=30mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$*	I_C=20mA,I_B=2mA			0.4	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$*	I_C=20mA, I_B=2mA			0.9	V
Transition frequency	f_T	V_{CE}=20V,I_C=10mA,f=100MHz	50			MHz
Collector output capacitance	C_{ob}	V_{CB}=20V,I_E=0, f=1MHz			4	pF

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

RATINGS AND CHARACTERISTIC CURVES

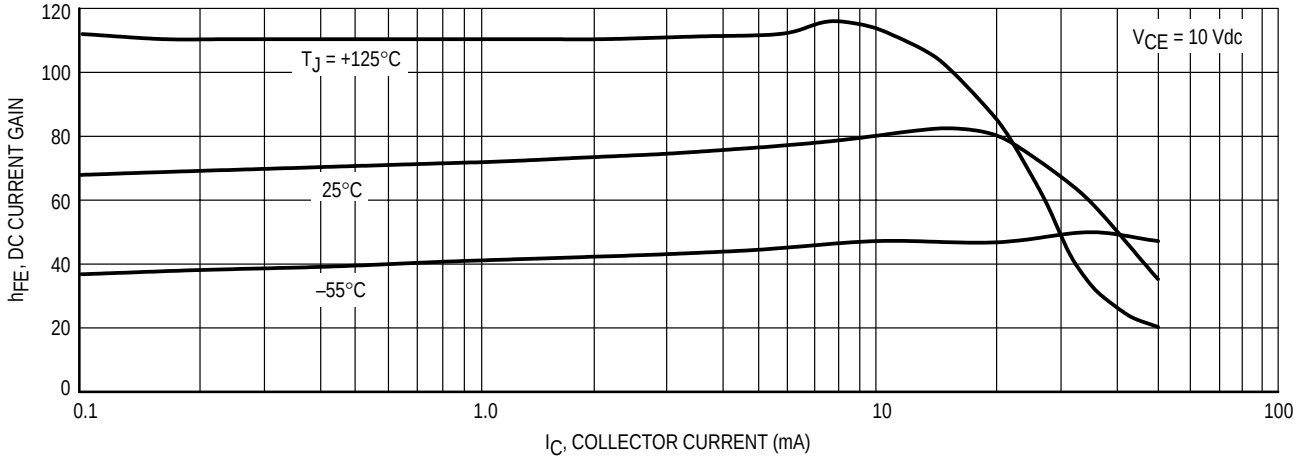


Figure 1. DC Current Gain

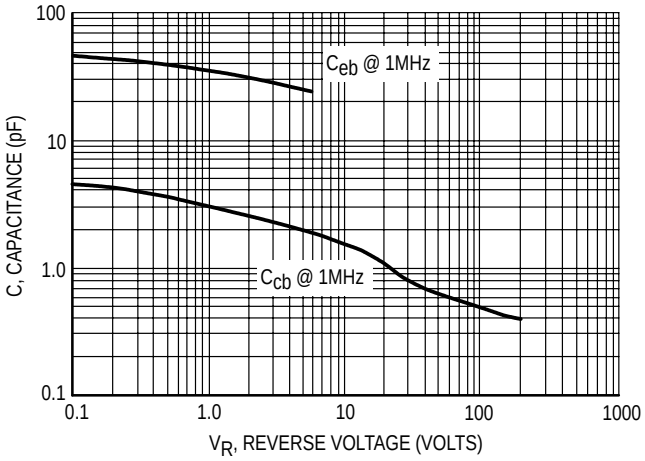


Figure 2. Capacitance

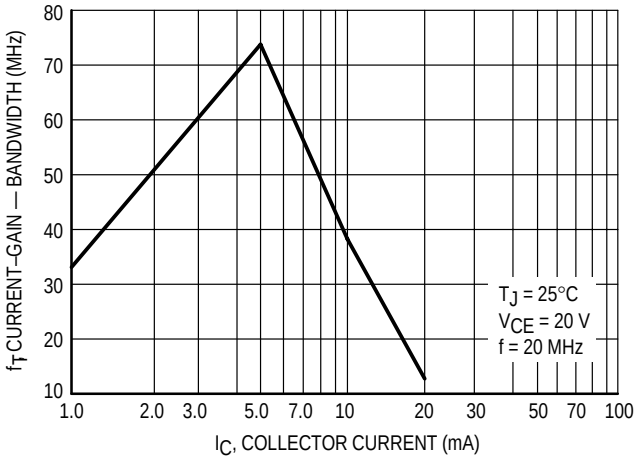
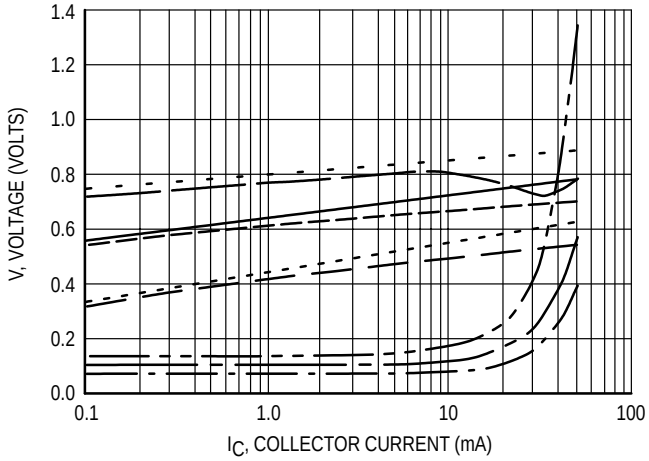


Figure 3. Current–Gain – Bandwidth



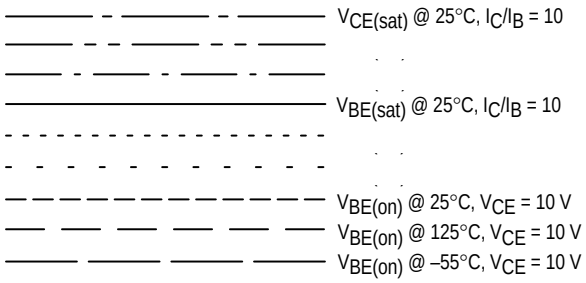


Figure 4. "ON" Voltages