



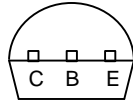
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MPSA92

Features

- Through Hole Package
- Operating & Storage Temperature: -55°C to +150°C
- Marking Code: A92

Pin Configuration
 Bottom View



PNP Silicon High Voltage Transistor

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ($I_C = -1.0\text{mA}$, $I_B = 0$)	-300		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C = -100\mu\text{A}$, $I_E = 0$)	-300		Vdc
$V_{(BR)EBO}$	Emitter -Base Breakdown Voltage ($I_E = -10\mu\text{A}$, $I_C = 0$)	-5.0		Vdc
I_{EBO}	Emitter Cutoff Current ($V_{EB} = -3.0\text{Vdc}$, $I_C = 0$)		-0.25	μA dc
I_{CBO}	Collector Cutoff Current ($V_{CB} = -200\text{Vdc}$, $I_E = 0$)		-0.25	μA dc

ON CHARACTERISTICS

h_{FE}	DC Current Gain* ($I_C = -1.0\text{mA}$, $V_{CE} = -10\text{Vdc}$) ($I_C = -10\text{mA}$, $V_{CE} = -10\text{Vdc}$) ($I_C = -50\text{mA}$, $V_{CE} = -10\text{Vdc}$)	25 80 25	250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = -20\text{mA}$, $I_B = -2.0\text{mA}$)		-0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C = -20\text{mA}$, $I_B = -2.0\text{mA}$)		-0.9	Vdc

SMALL-SIGNAL CHARACTERISTICS

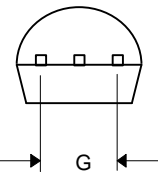
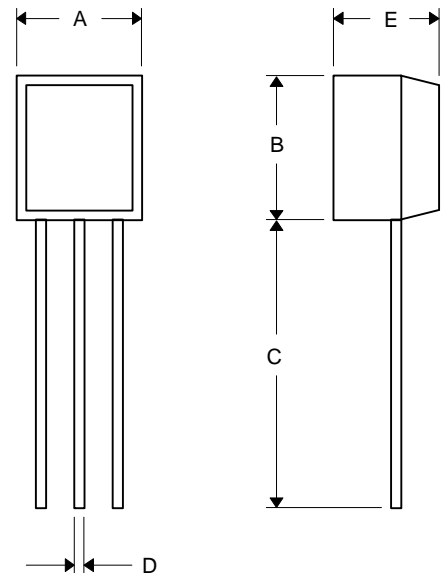
f_T	Current Gain-Bandwidth Product ($I_C = -10\text{mA}$, $V_{CE} = -5\text{Vdc}$, $f = 30\text{MHz}$)	50		MHz
C_{cb}	Collector -Base Capacitance ($V_{CB} = -20\text{Vdc}$, $I_E = 0$, $f = 1.0\text{MHz}$)		6.0	pF

*Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

MAXIMUM RATINGS

Symbol	Characteristic	MPSA92	Unit
V_{CEO}	Collector - Emitter Voltage	-300	Vdc
V_{CBO}	Collector - Base Voltage	-300	Vdc
V_{EBO}	Emitter - Base Voltage	-5.0	Vdc
I_C	Collector Current - Continuous	-300	mA dc
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	$^{\circ}\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	$^{\circ}\text{C}/\text{W}$
P_D	Total Device Dissipation @ $T_A = 25^{\circ}\text{C}$ Derate above 25°C	625 5.0	mW mW/ $^{\circ}\text{C}$
P_D	Total Device Dissipation @ $T_C = 25^{\circ}\text{C}$ Derate above 25°C	1.5 12	Watts mW/ $^{\circ}\text{C}$

TO-92



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

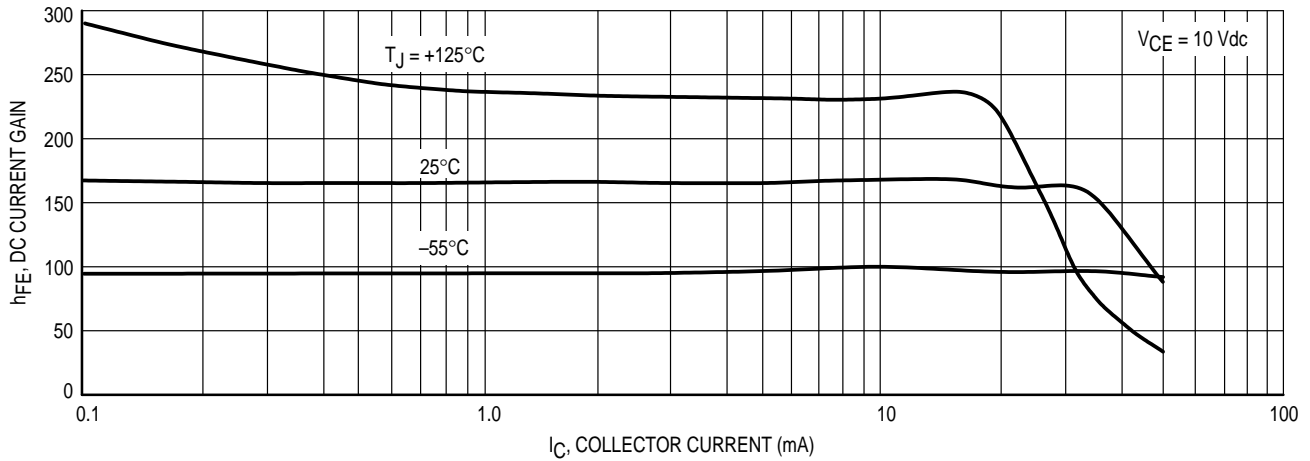


Figure 1. DC Current Gain

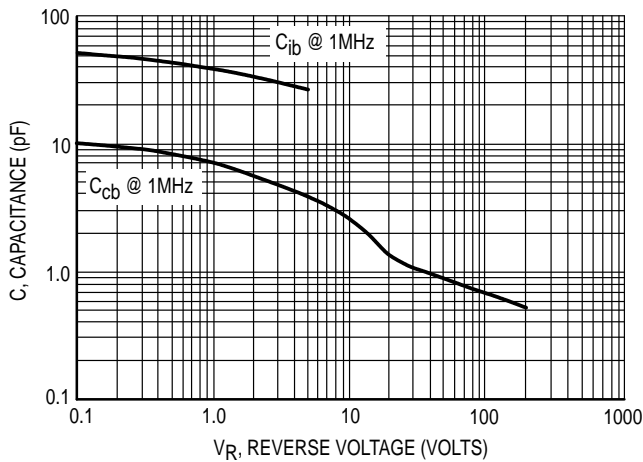


Figure 2. Capacitance

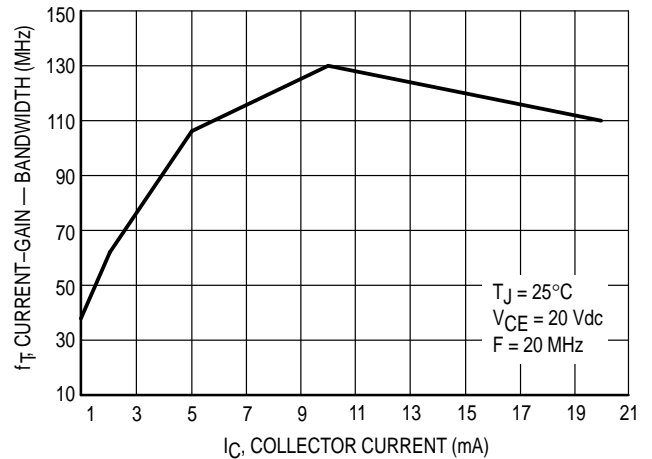


Figure 3. Current-Gain — Bandwidth

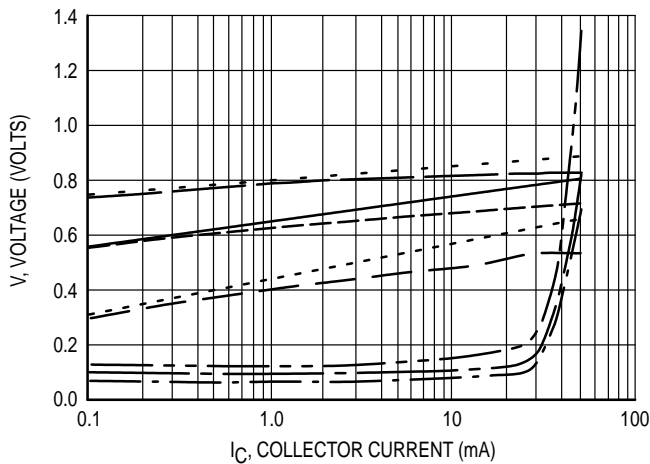


Figure 4. "ON" Voltages

- $V_{CE(sat)}$ @ 25°C , $I_C/I_B = 10$
- $V_{CE(sat)}$ @ 125°C , $I_C/I_B = 10$
- $V_{CE(sat)}$ @ -55°C , $I_C/I_B = 10$
- $V_{BE(sat)}$ @ 25°C , $I_C/I_B = 10$
- $V_{BE(sat)}$ @ 125°C , $I_C/I_B = 10$
- $V_{BE(sat)}$ @ -55°C , $I_C/I_B = 10$
- $V_{BE(on)}$ @ 25°C , $V_{CE} = 10 \text{ V}$
- $V_{BE(on)}$ @ 125°C , $V_{CE} = 10 \text{ V}$
- $V_{BE(on)}$ @ -55°C , $V_{CE} = 10 \text{ V}$