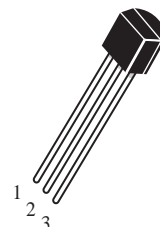


Driver NPN Transistors

(Pb) Lead(Pb)-Free

TO-92

1. EMITTER
 2. BASE
 3. COLLECTOR



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	MPSA05	MPSA06	Unit
Collector-Emitter Voltage	V _{CEO}	60	80	Vdc
Collector-Base Voltage	V _{CBO}	60	80	Vdc
Emitter-Base Voltage	V _{EBO}	4.0		Vdc
Collector Current	I _C	500		mAdc
Total Device Dissipation T _A =25°C	P _D	0.625		W
Junction Temperature	T _j	150		°C
Storage, Temperature	T _{stg}	-55 to +150		°C

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I _C = 1.0 mAdc, I _B =0) MPSA05 MPSA06	V _{(BR)CEO}	60 80	-	Vdc
Collector-Base Breakdown Voltage (I _C = 100 uAdc, I _E =0) MPSA05 MPSA06	V _{(BR)CBO}	60 80	-	Vdc
Emitter-Base Breakdown Voltage (I _E = 100 uAdc, I _C =0)	V _{(BR)EBO}	4.0	-	Vdc
Collector Cutoff Current (V _{CE} = 50 Vdc, I _B =0) MPSA05 (V _{CE} = 60 Vdc, I _B =0) MPSA06	I _{CEO}	-	0.1	uAdc
Collector Cutoff Current (V _{CE} = 60 Vdc, I _B =0) MPSA05 (V _{CE} = 80 Vdc, I _B =0) MPSA06	I _{CBO}	-	0.1	uAdc
Emitter Cutoff Current (V _{EB} = 3.0Vdc, I _C =0)	I _{EBO}	-	0.1	uAdc

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted) (Continued)

Characteristics	Symbol	Min	TYP	Max	Unit
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ON CHARACTERISTICS

DC Current Gain ($I_C=100\text{ mA}, V_{CE}=1.0\text{ Vdc}$)	$h_{FE(1)}$	100	-	-	-
Collector-Emitter Saturation Voltage ($I_C=100\text{ mA}, I_B=10\text{ mA}$)	$V_{CE(sat)}$	-	-	0.25	Vdc
Base-Emitter Saturation Voltage ($I_C=100\text{ mA}, I_B=10\text{ mA}$)	$V_{BE(sat)}$	-	-	1.2	Vdc
Current-Gain-Bandwidth Product ($I_C=10\text{ mA}, V_{CE}=2.0\text{ Vdc}, f=100\text{ MHz}$)	f_T	100	-	-	MHz

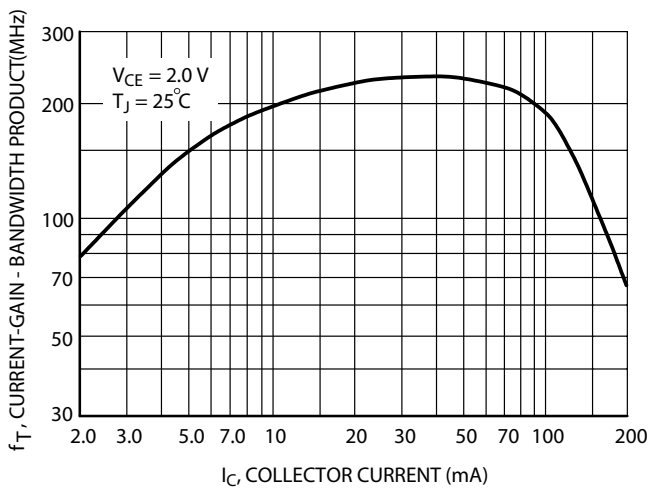


FIG1. Current-Gain Bandwidth Product

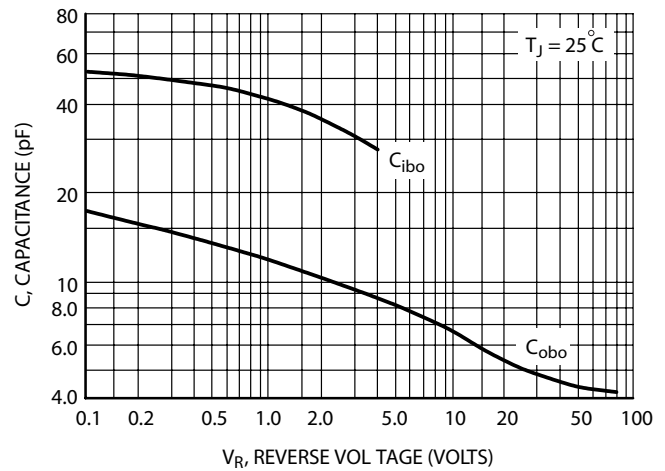


FIG2. Capacitance

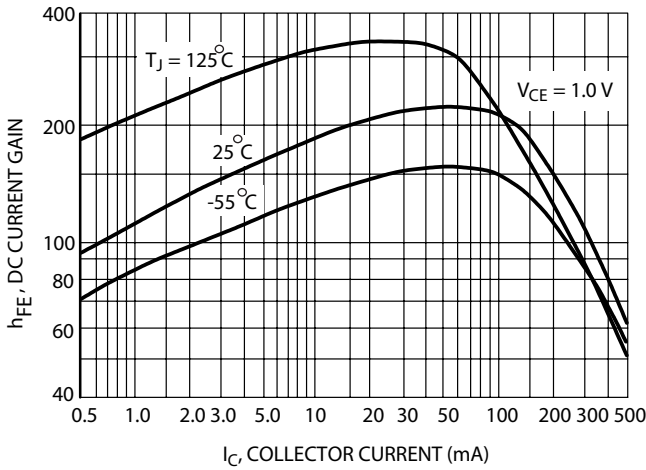


FIG3. DC Current Gain

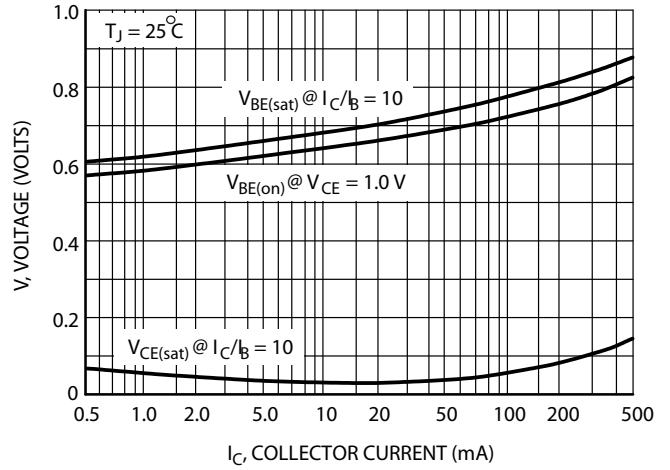


FIG4. "ON" Voltages

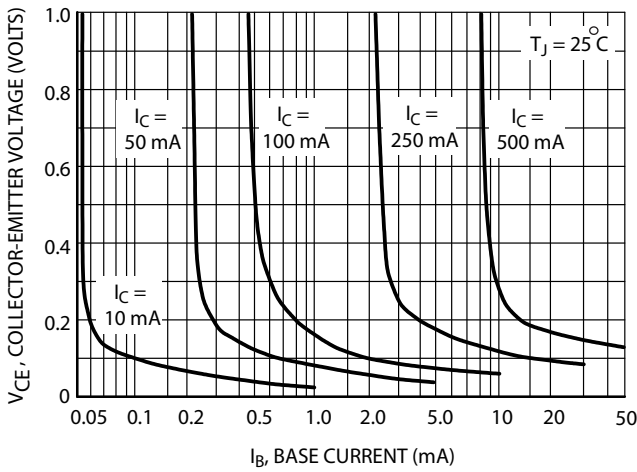


FIG5. Collector Saturation Region

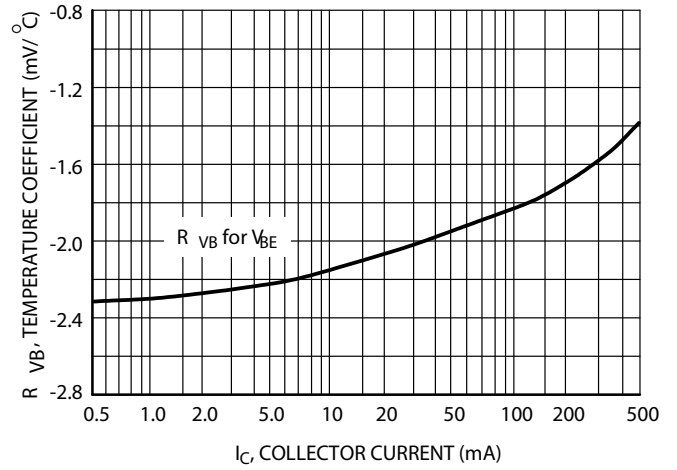
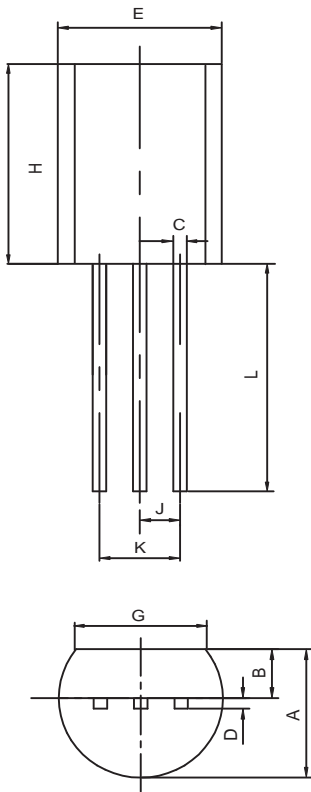


FIG6. Base-Emitter Temperature Coefficient

TO-92 Outline Dimensions

unit:mm



TO-92		
Dim	Min	Max
A	3.30	3.70
B	1.10	1.40
C	0.38	0.55
D	0.36	0.51
E	4.40	4.70
G	3.43	-
H	4.30	4.70
J	1.270TYP	
K	2.44	2.64
L	14.10	14.50