



TO-92 Plastic-Encapsulate Transistors

MPSA06

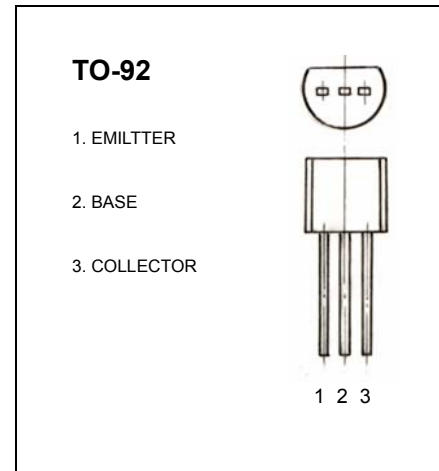
TRANSISTOR (NPN)

FEATURES

Power amplifier

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

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	0.5	A
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	417	$^{\circ}\text{C}/\text{W}$

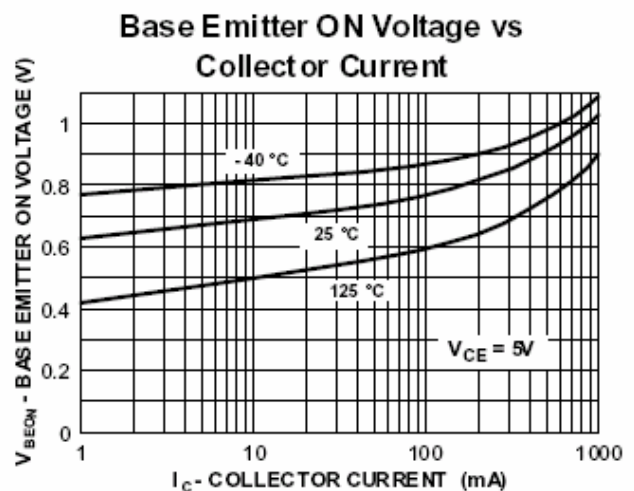
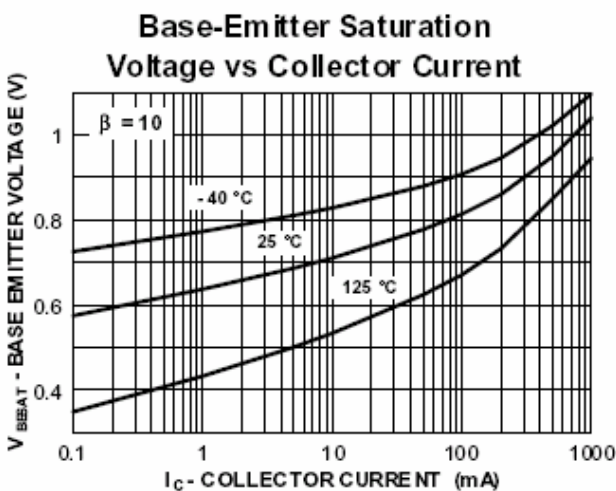
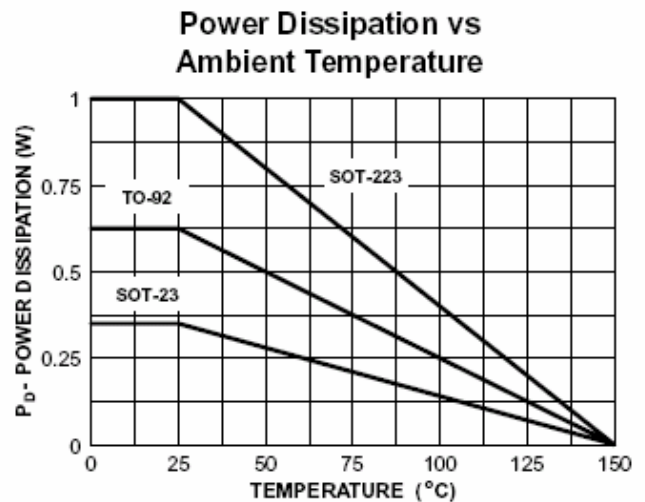
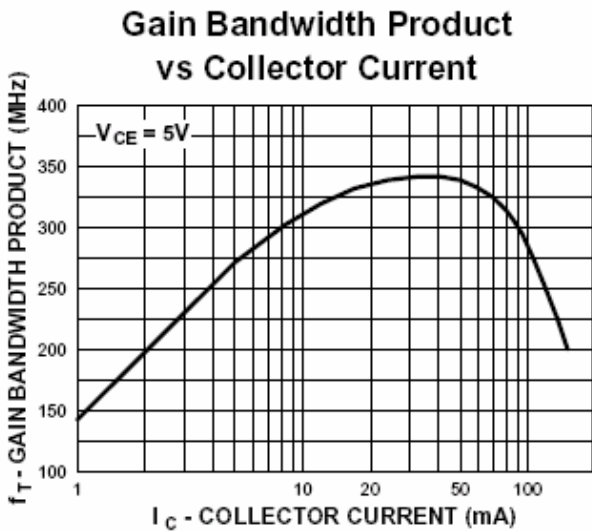
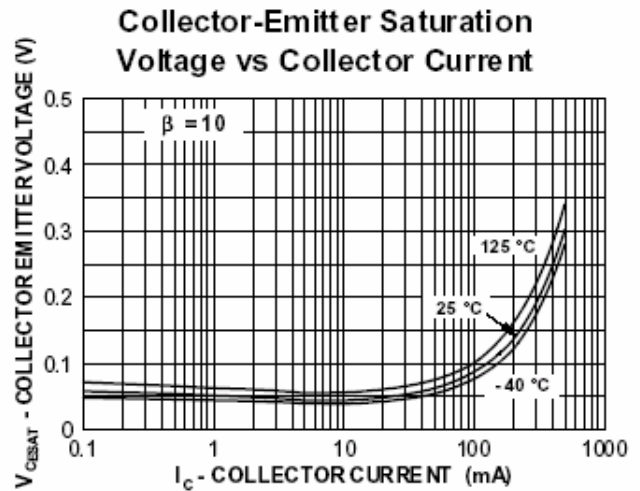
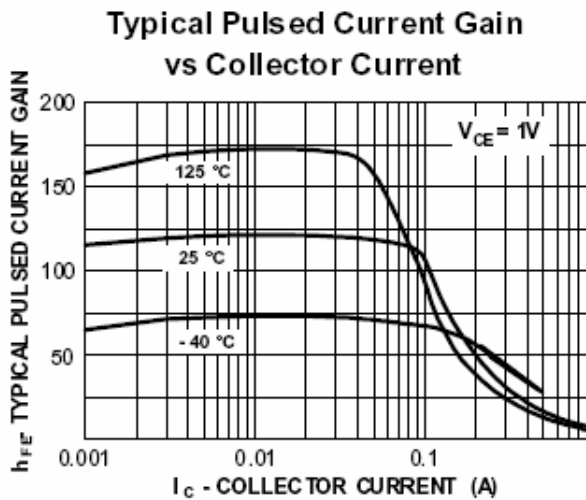


ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

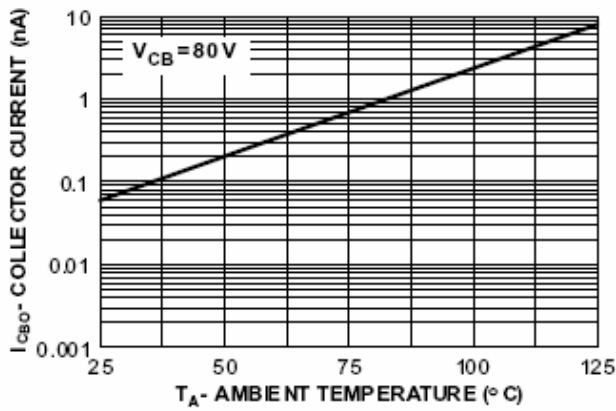
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	80		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	80		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	4		V
Collector cut-off current	I_{CBO}	$V_{CB}=80\text{V}$, $I_E=0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=60\text{V}$, $I_B=0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}$, $I_C=0$		0.1	μA
DC current gain	h_{FE1}	$V_{CE}=1\text{V}$, $I_C=100\text{mA}$	100	400	
	h_{FE2}	$V_{CE}=1\text{V}$, $I_C=10\text{mA}$	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$		0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$		1.2	V
Transition frequency	f_T	$V_{CE}=2\text{V}$, $I_C=10\text{mA}$ $f=100\text{MHz}$	100		MHz

Typical Characteristics

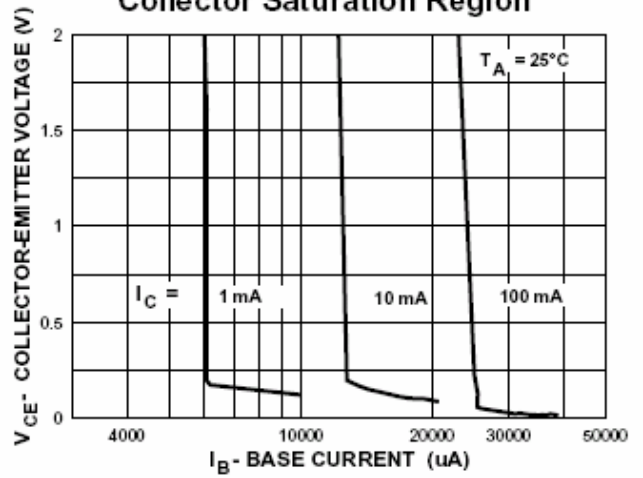
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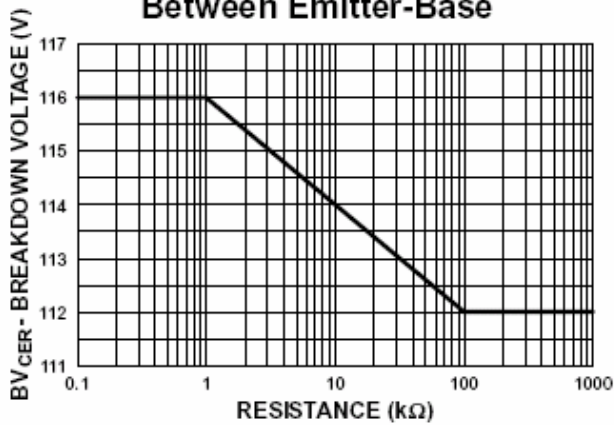
Collector-Cutoff Current vs Ambient Temperature



Collector Saturation Region



Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base



Input and Output Capacitance vs Reverse Voltage

