

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

*Low current (max. 500mA)

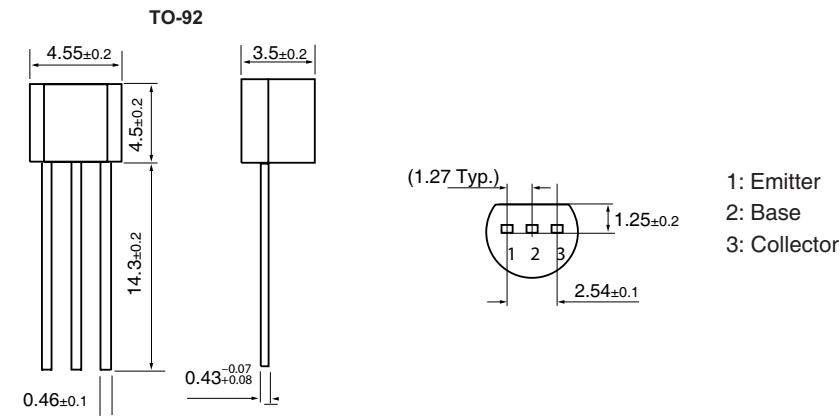
*Low voltage (max. 80V).

APPLICATIONS

*General purpose switching and amplification.

DESCRIPTION

NPN transistor in a TO-92; plastic package.
PNP complement: MPSA56.



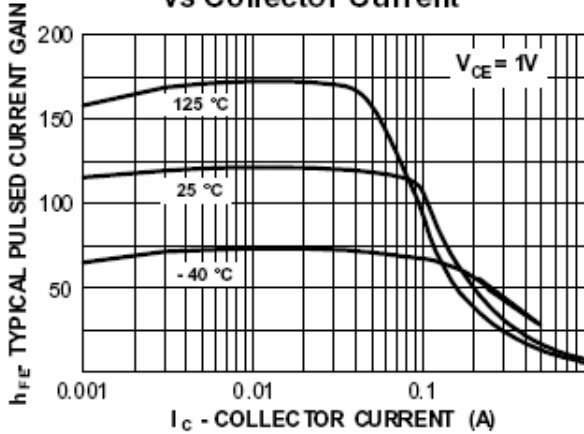
Symbol	Parameter	Value	Units
P_{CM}	Power Dissipation	0.625	W
I_{CM}	Collector Current	0.5	A
$V_{(BR)CBO}$	Collector-Base Voltage	80	V
T_{stg}	Storage Temperature	-55~+150	°C
T_J	Junction Temperature	150	°C

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

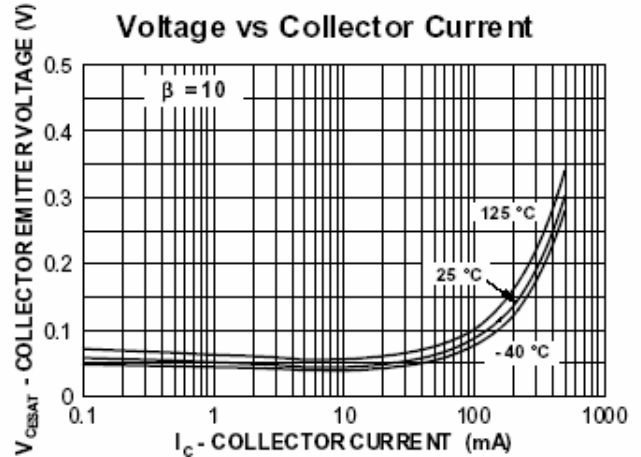
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	80		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	80		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	4		V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}$, $I_E=0$		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	$H_{FE(1)}$	$V_{CE}=1\text{V}$, $I_C=100\text{mA}$	100	200	
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

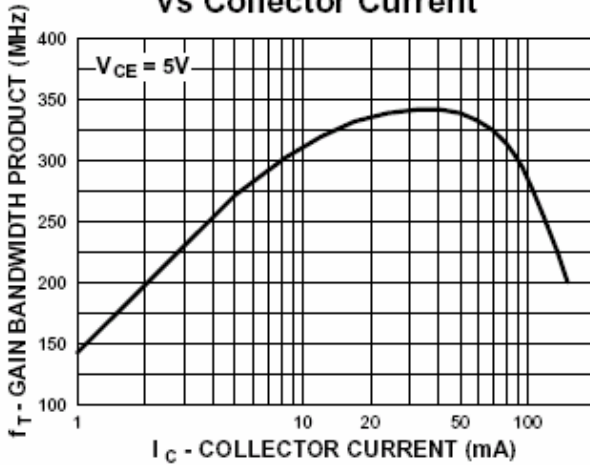
Typical Pulsed Current Gain vs Collector Current



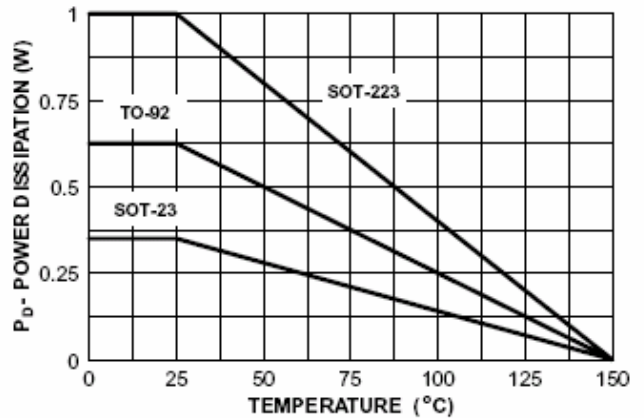
Collector-Emitter Saturation Voltage vs Collector Current



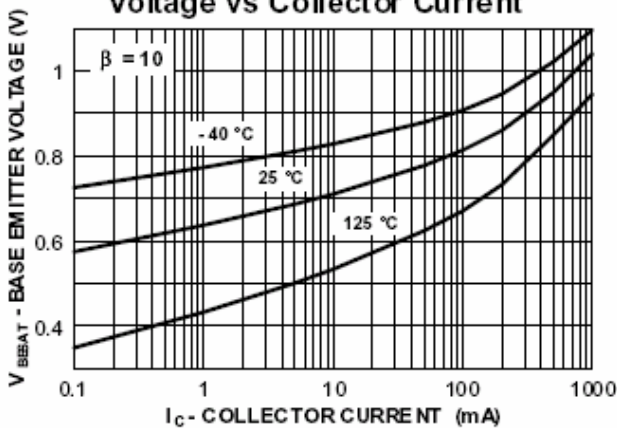
Gain Bandwidth Product vs Collector Current



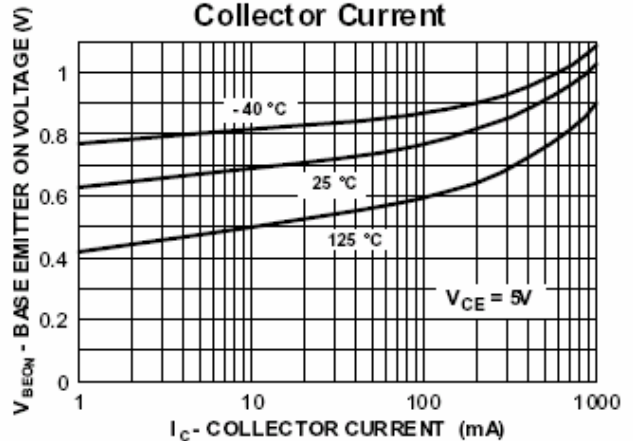
Power Dissipation vs Ambient Temperature



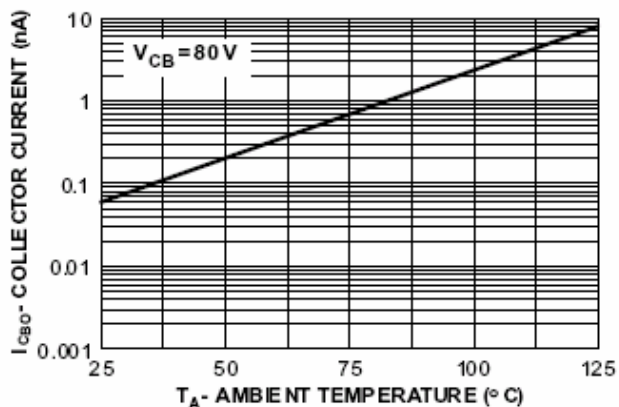
Base-Emitter Saturation Voltage vs Collector Current



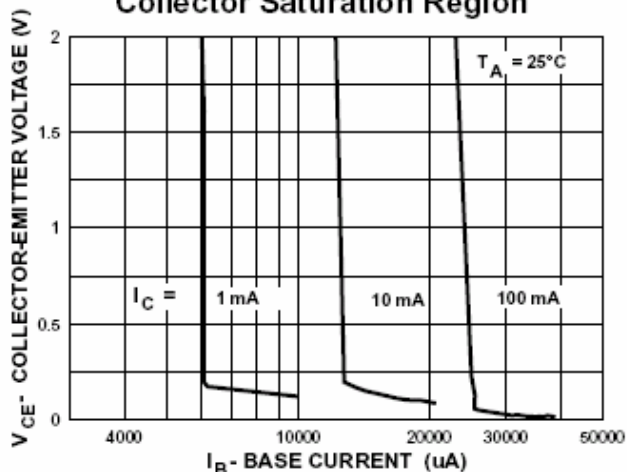
Base Emitter ON Voltage vs Collector Current



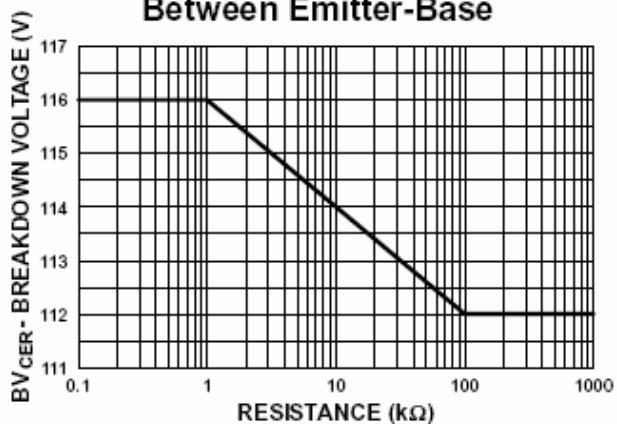
Collector-Cutoff Current vs Ambient Temperature



Collector Saturation Region



Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base



Input and Output Capacitance vs Reverse Voltage

