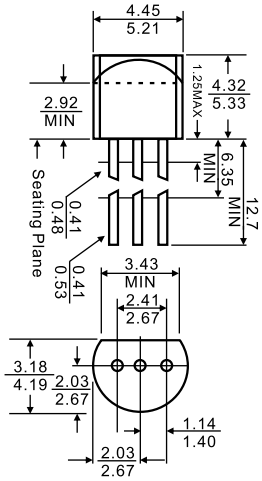
TIGER ELECTRONIC CO.,LTD

MPSA06

TO-92 Transistor (NPN)

1. EMITTER
2. BASE
3. COLLECTOR

TO-92



Dimensions in inches and (millimeters)

Features

✧ **Power amplifier**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	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	℃
T_{stg}	Storage Temperature	-55-150	℃
$R_{\theta JA}$	Thermal Resistance,Junction to Ambient	417	℃/W

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

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

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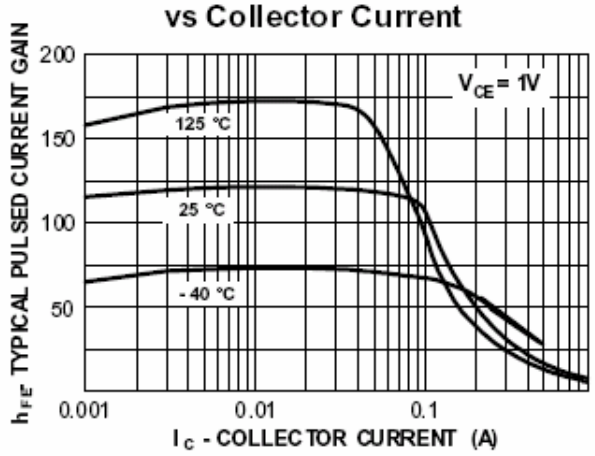
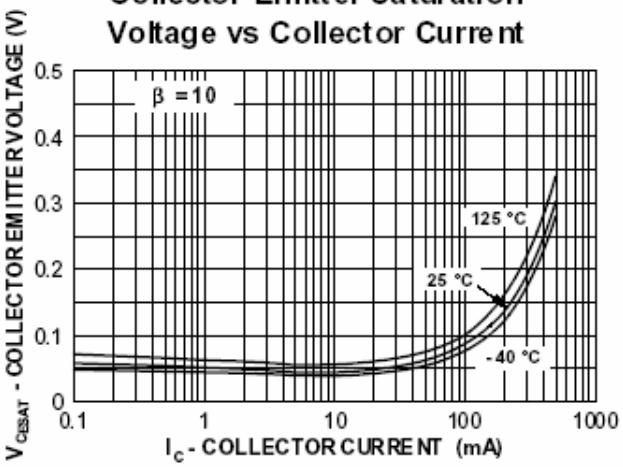
Typical Characteristics

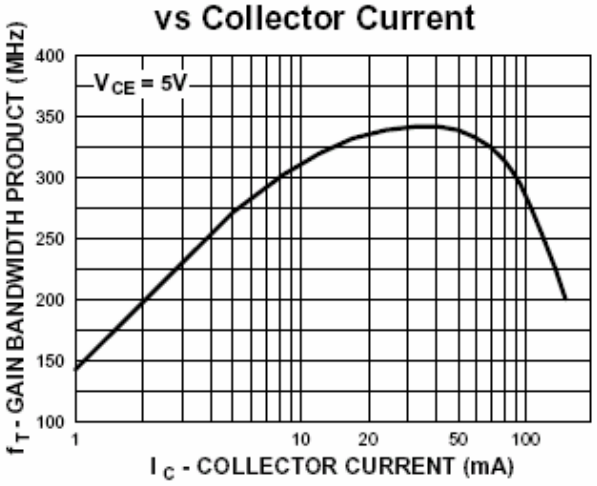
Typical Pulsed Current Gain vs Collector Current



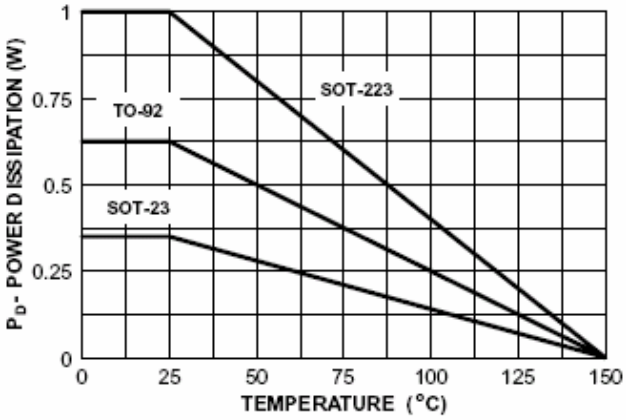
Collector-Emitter Saturation Voltage vs Collector Current



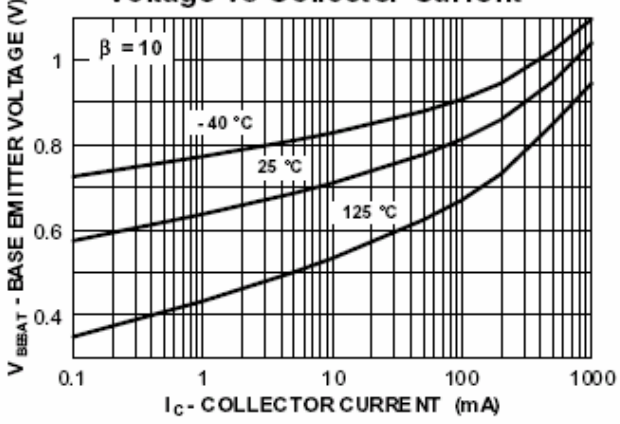
Gain Bandwidth Product vs Collector Current



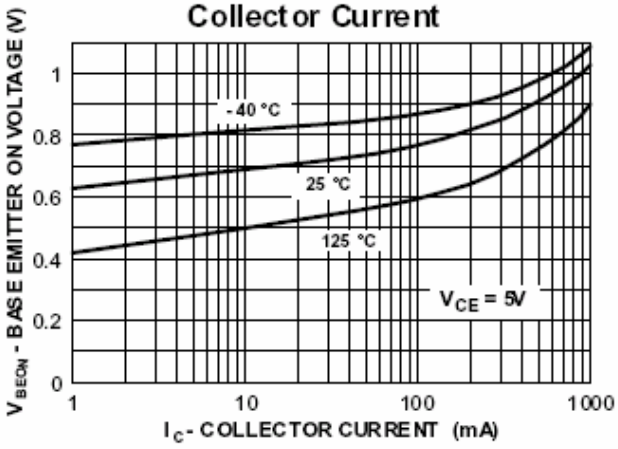
Power Dissipation vs Ambient Temperature



Base-Emitter Saturation Voltage vs Collector Current



Base Emitter ON Voltage vs Collector Current



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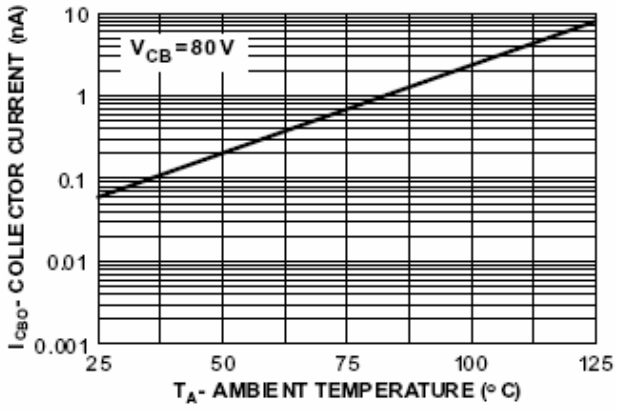
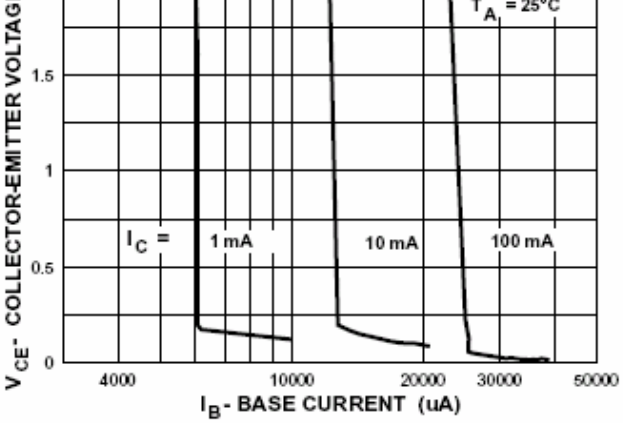
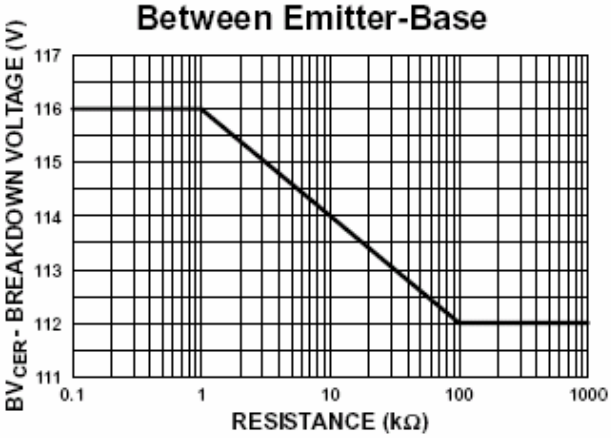
Collector-Cutoff Current
vs Ambient Temperature



Collector Saturation Region



Collector-Emitter Breakdown
Voltage with Resistance
Between Emitter-Base



Input and Output Capacitance
vs Reverse Voltage