

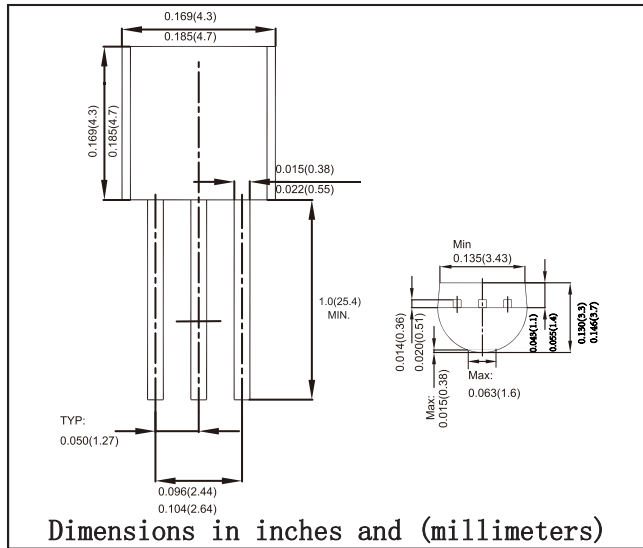
TO-92 Plastic-Encapsulate Transistors

FEATURES

- General Purpose Amplifier
- TRANSISTOR (NPN)

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Alue	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	0.5	A
P_D	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambien	200	°C /W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~+150	°C

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MPSA05	TO-92	Bulk	1000pcs/Bag
MPSA05-TA	TO-92	Tape	2000pcs/Box

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 0.1mA, I_E = 0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, I_B = 0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 0.1mA, I_C = 0$	4			V
Collector cut-off current	I_{CBO}	$V_{CB} = 60V, I_E = 0$			0.1	KA
Collector cut-off current	I_{CEO}	$V_{CE} = 60V, I_B = 0$			0.1	KA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3V, I_C = 0$			1	KA
DC current gain	$h_{FE(1)}$	$V_{CE} = 1.0V, I_C = 100mA$	100			
	$h_{FE(2)}$	$V_{CE} = 1.0V, I_C = 10mA$	100			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 10mA$			0.25	V
Base-emitter voltage	V_{BE}	$I_C = 100mA, V_{CE} = 1.0V$			1.2	V
Transition frequency	f_T	$V_{CE} = 2.0V, I_C = 10mA, f = 100MHz$	100			MHz

Marking	MPSA05
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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Static Characteristics

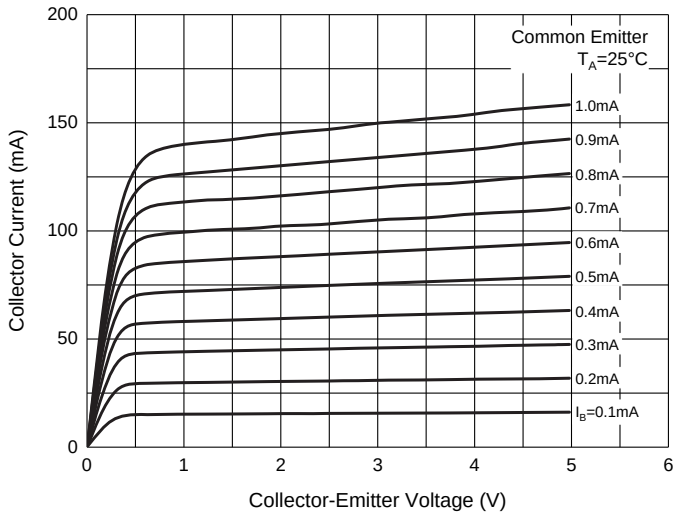


Fig. 2 - DC Current Gain Characteristics

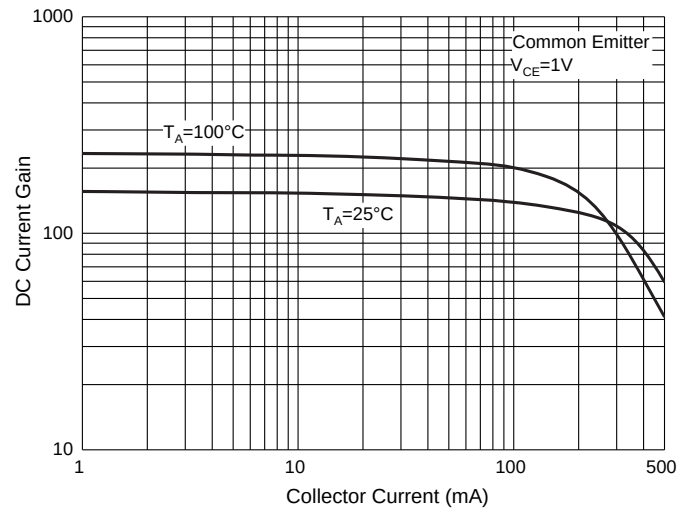


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

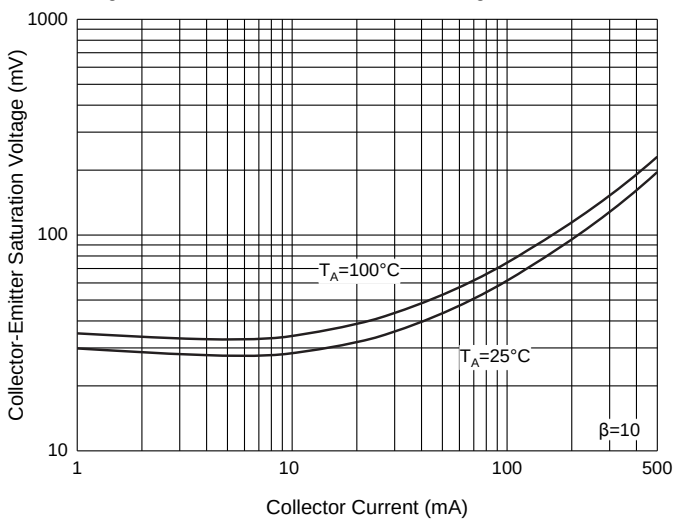


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

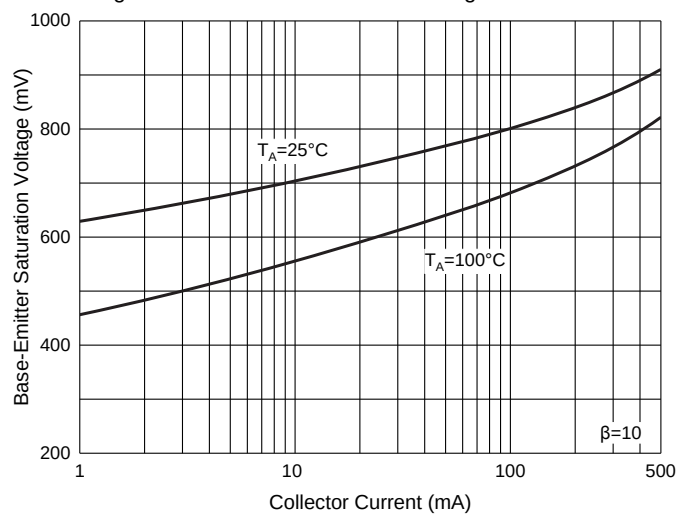


Fig. 5 - Base-Emitter Voltage Characteristics

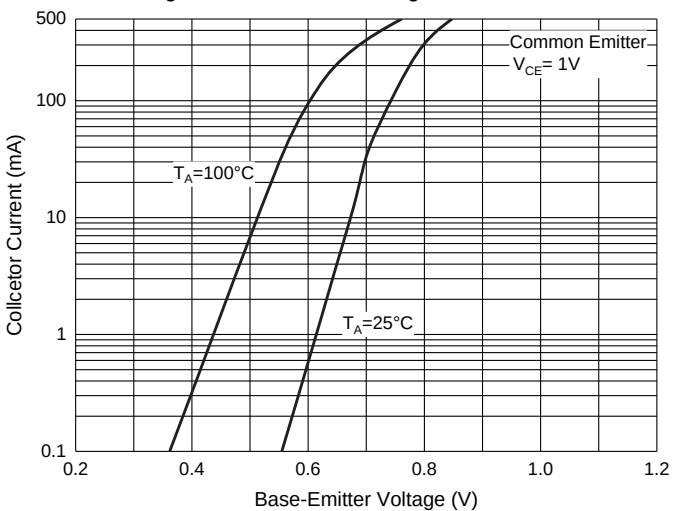


Fig. 6 - Collector Power Derating Curve

