

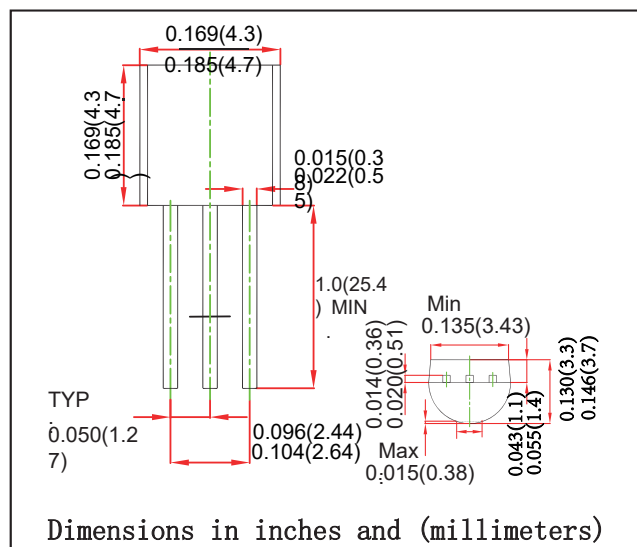
TO-92 Plastic-Encapsulate Transistors

FEATURES

- Switching and amplification in high voltage
- Applications such as telephony
- Low current
- High voltage
- NPN Transistors

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	350	V
Collector-Emitter Voltage	V_{CEO}	350	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	0.5	A
Collector Power Dissipation	k_D	625	mW
Thermal Resistance from Junction to Ambient	R_{KJA}	200	°C /W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~+150	°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	350			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	3			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.01mA, I_C=0$				V
Collector cut-off current	I_{CBO}	$V_{CB}=250V, I_E=0$			0.05	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.05	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=1mA$	2			
		$V_{CE}=10V, I_C=10mA$	3			
		$V_{CE}=10V, I_C=30mA$	3		200	
		$V_{CE}=10V, I_C=50mA$	2		200	
		$V_{CE}=10V, I_C=100mA$	1			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.3	V
		$I_C=50mA, I_B=5mA$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$			0.75	
		$I_C=20mA, I_B=2mA$			0.85	
		$I_C=30mA, I_B=3mA$			0.9	V
Base-emitter voltage	V_{BE}	$V_{CE}=10V, I_C=100mA$			2	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=20MHz$			200	M
Collector output capacitance	C_{ob}	$V_{CB}=20V, I_E=0, f=1MHz$			6	pF

*Pulse test: pulse width ≤300μs, duty cycles ≤2.0%.

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Static Characteristics

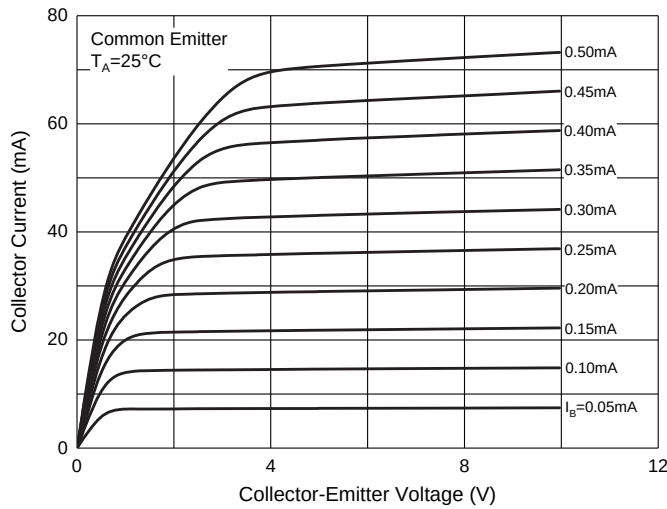


Fig. 2 - DC Current Gain Characteristics

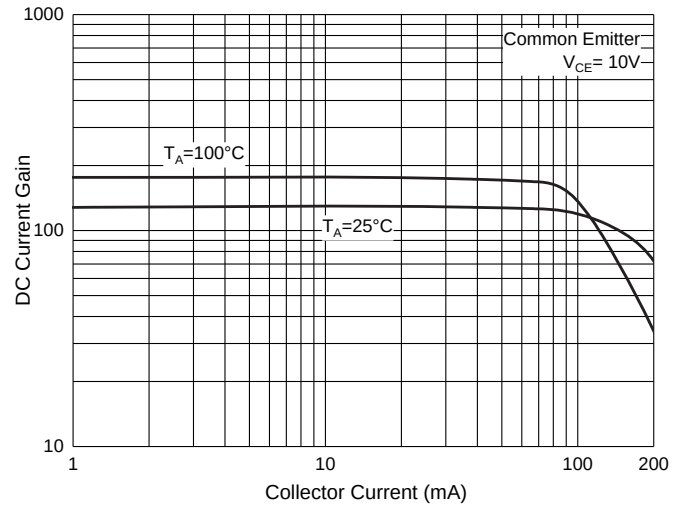


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

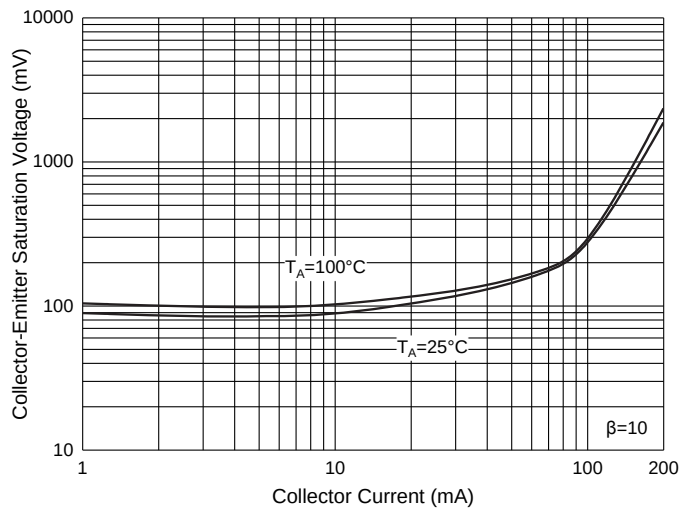


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

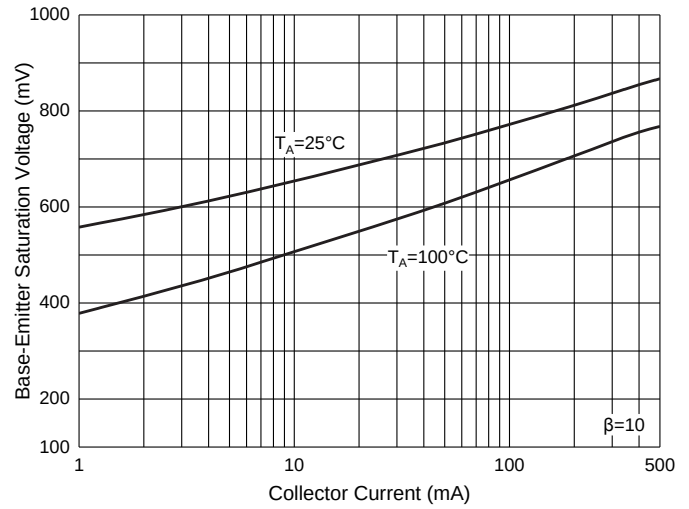


Fig. 5 - Base-Emitter Voltage Characteristics

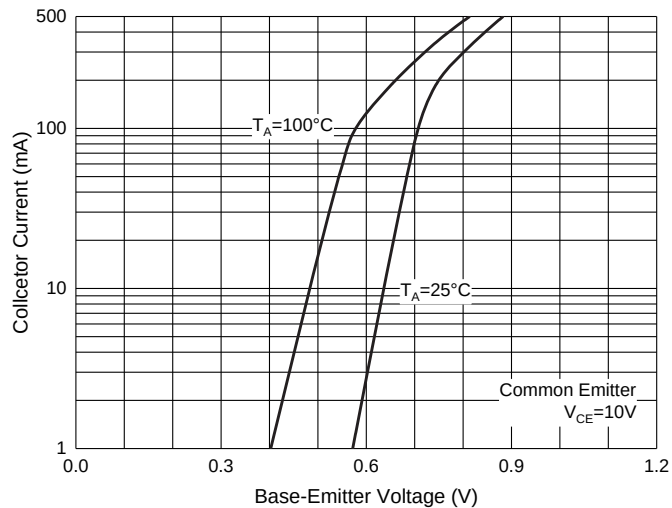


Fig. 6 - Collector Power Derating Curve

