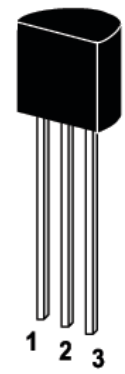
PNP Transistor
for amplifier applications

On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Base 3. Collector

TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings* (T_a = 25 °C)

	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	60	V
Emitter Base Voltage	$-V_{EBO}$	4.0	V
Collector Current	$-I_C$	500	mA
Total Device Dissipation at Ta=25℃ Derate above 25℃	P_{tot}	625 5	mW mW/℃
Total Device Dissipation at Tc=25℃ Derate above 25℃	P_{tot}	1.5 12	W mW/℃
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	℃/W
Thermal Resistance, Junction to Ambient(Note1)	$R_{\theta JA}$	200	℃/W
Junction Temperature	T_j	-55 to +150	℃
Storage Temperature Range	T_S	-55 to +150	℃

1.$R_{\Theta JA}$ is measured with the device soldered into a typical printed circuit board.

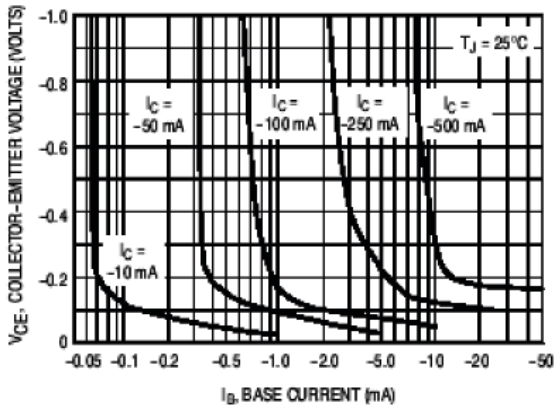


Figure 7 . Collector Saturation Region

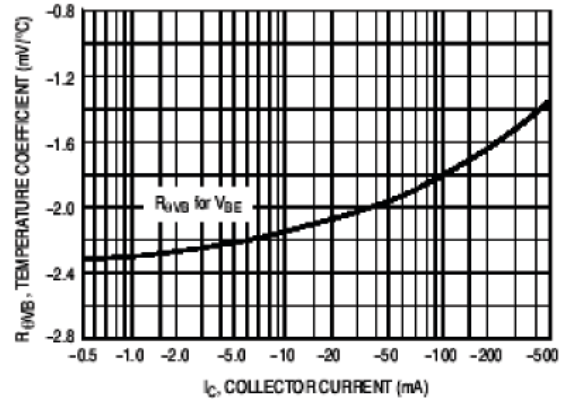


Figure 8 . Base–Emitter Temperature Coefficient

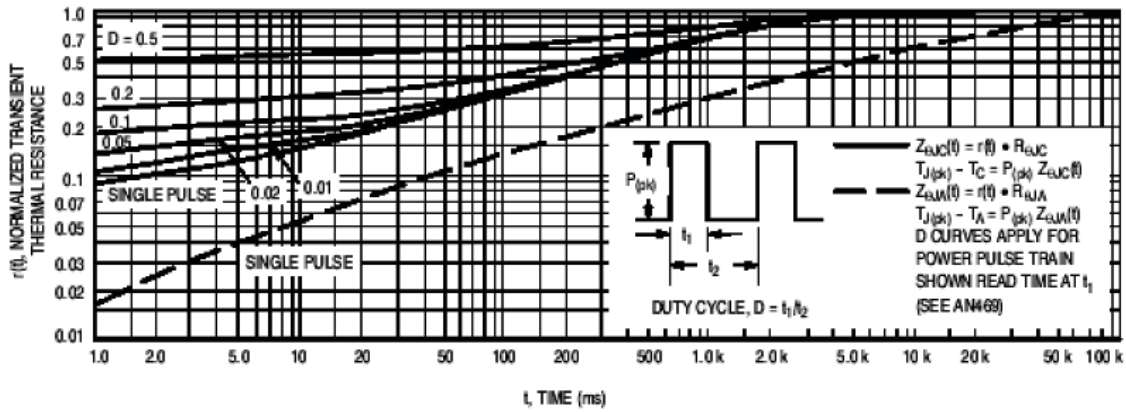


Figure 9 . Thermal Response

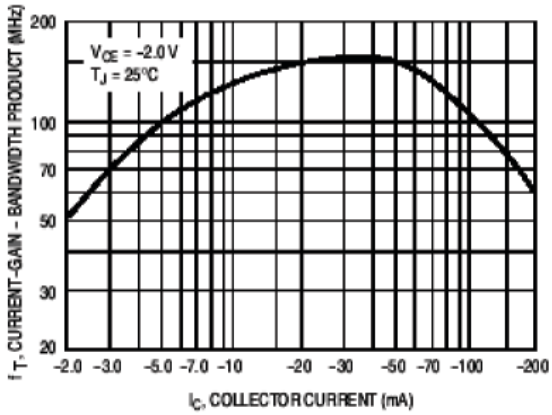


Figure 1. Current–Gain — Bandwidth Product

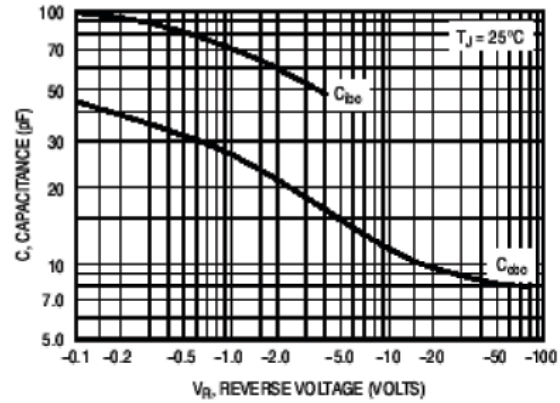


Figure 2. Capacitance

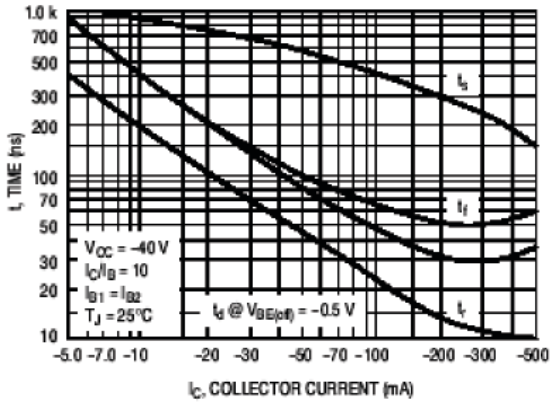


Figure 3. Switching Time

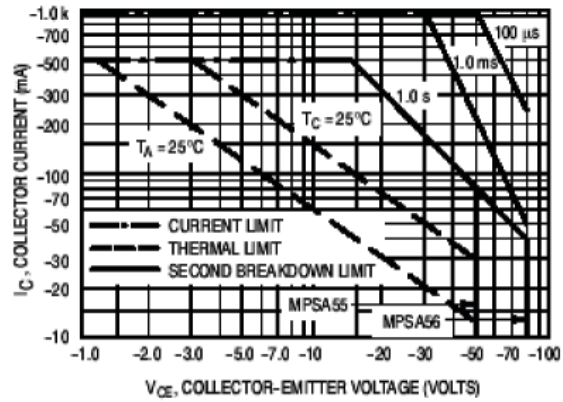


Figure 4. Active–Region Safe Operating Area

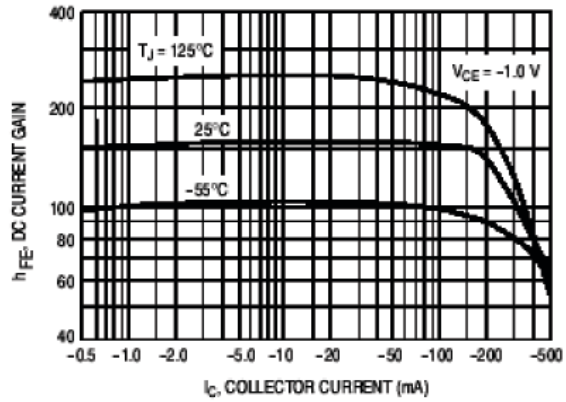


Figure 5. Current Gain

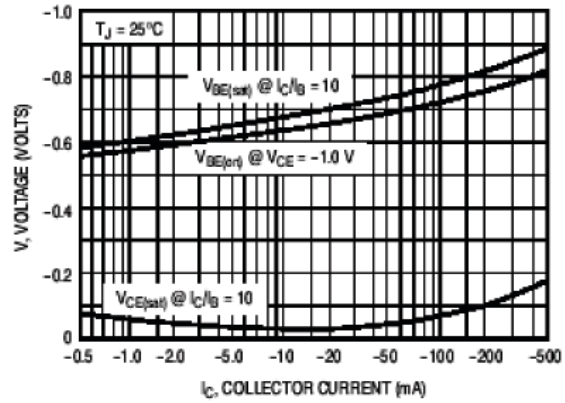


Figure 6. "ON" Voltages

Characteristics at T_{amb}=25 °C

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at $-I_C$=10mA, $-V_{CE}$=1V	h_{FE}	100	-	-	-
at $-I_C$=100mA, $-V_{CE}$=1V	h_{FE}	100	-	-	-
Collector Cutoff Current					
at $-V_{CB}$=60V	$-I_{CBO}$	-	-	0.1	µA
Collector Cutoff Current					
at $-V_{CE}$=60V	$-I_{CES}$	-	-	0.1	µA
Collector Emitter Breakdown Voltage[1]					
at $-I_C$=1mA	$-V_{(BR)CEO}$	60	-	-	V
Emitter Base Breakdown Voltage					
at $-I_E$=100µA	$-V_{(BR)EBO}$	4	-	-	V
Collector Saturation Voltage					
at $-I_C$=100mA, $-I_B$=10mA	$-V_{CE(sat)}$	-	-	0.25	V
Base On Voltage					
at $-I_C$=100mA, $-V_{CE}$=1V	$-V_{BE(on)}$	-	-	1.2	V
Current Gain – Bandwidth Product[2]					
at $-I_C$=100mA, $-V_{CE}$=1V, f=100MHz	f_T	50	-	-	MHz

1) Pulse test: Pulse Width ≦300µs, Duty Cycle ≦2%.

2) f_T is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.