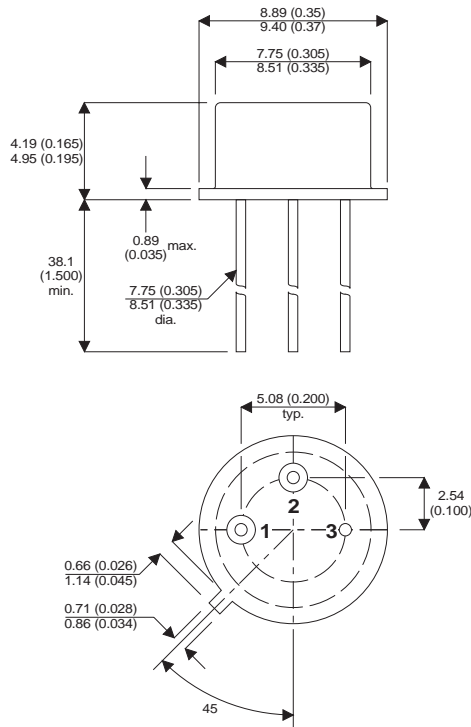


MECHANICAL DATA

Dimensions in mm



TO-5

Pin1 - Emitter

Pin2 - Base

Pin3 - Collector

SMALL SIGNAL PNP TRANSISTORS IN TO-5

APPLICATIONS

Small signal PNP transistors for relay switching resistor logic circuits and general purpose applications.

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

		2N5404	2N5405	2N5406	2N5407
BV_{CBO}	Collector – Base Breakdown Voltage	- 80V	- 100V	- 80V	- 100V
BV_{CEO}	Collector – Emitter Breakdown Voltage	- 80V	- 100V	- 80V	- 100V
BV_{EBO}	Emitter – Base Breakdown Voltage	- 6V	-6V	- 6V	-6V
$I_{C(Max)}$	Collector Current	- 5A	-5A	- 5A	-5A
$I_{B(Max)}$	Base Current	- 2A	- 2A	- 2A	- 2A
P_{TOT}	Total Power Dissipation (100°C Case)	5W	5W	5W	5W
T_{STG}, T_J	Operating and Storage Temperature Range	- 65°C to +200°C			

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEX} Collector Cut-Off Current	$V_{\text{CE}} = BV_{\text{CEO}} V_{\text{BE}} = 1.5\text{V}$ $V_{\text{CE}} = BV_{\text{CEO}} V_{\text{BE}} = 1.5\text{V}$ $T_{\text{C}} = 150^{\circ}\text{C}$			-10 -500	μA
$V_{\text{CEO}}^{(\text{SUS})}$ Collector-Emitter Sustaining Voltage With Base Open	$I_{\text{C}} = -100\text{mA} I_{\text{B}} = 0$ 2N5404 2N5406	-80			V
	$I_{\text{C}} = -100\text{mA} I_{\text{B}} = 0$ 2N5405 2N5407	-100			
I_{CEO} Collector Cut-Off Current	$V_{\text{CE}} = -50\text{V} I_{\text{C}} = 0$	-100			μA
I_{EBO}	$V_{\text{EB}} = -4\text{V} I_{\text{C}} = 0$			-1	μA
h_{FE} Common Emitter, Small-Signal Value of the Short-Circuit Forward Current Transfer Ratio ($f = 1\text{KHz}$)	$I_{\text{C}} = -2\text{A} V_{\text{CE}} = -5\text{V}$ 2N5404 2N5405	20		60	-
	$I_{\text{C}} = -2\text{A} V_{\text{CE}} = -5\text{V}$ 2N5406 2N5407	40		120	
$V_{\text{CE}}^{(\text{SAT})}$ Collector-Emitter Saturation Voltage	$I_{\text{C}} = -2\text{A} I_{\text{B}} = -0.2\text{A}$			-0.6	V
$V_{\text{BE}}^{(\text{SAT})}$ Base-Emitter Saturation Voltage	$I_{\text{C}} = -2\text{A} I_{\text{B}} = -0.2\text{A}$			-1.2	V
DYNAMIC CHARACTERISTICS					
C_{OBO} Collector Base Capacitance	$V_{\text{CB}} = -10\text{V} f = 1\text{MHz}$			150	pf
f_{t} Transistion Frequency	$V_{\text{CE}} = -5\text{V} I_{\text{C}} = -0.2\text{A}$	40			MHz
t_{r} Rise Time	$I_{\text{C}} = -2\text{A}$ $I_{\text{B1}} = -I_{\text{B2}} = 0.2\text{A}$			0.5	μ
t_{s} Storage time	$I_{\text{C}} = -2\text{A}$ 2N5404 $I_{\text{B1}} = -I_{\text{B2}} = 0.2\text{A}$ 2N5405			0.75	μ
	$I_{\text{C}} = -2\text{A}$ 2N5406 $I_{\text{B1}} = -I_{\text{B2}} = 2\text{A}$ 2N5407			1	
t_{f} Fall Time	$I_{\text{C}} = -2\text{A}$ 2N5404 $I_{\text{B1}} = -I_{\text{B2}} = 2\text{A}$ 2N5405			0.2	μ
	$I_{\text{C}} = -2\text{A}$ 2N5406 $I_{\text{B1}} = -I_{\text{B2}} = 2\text{A}$ 2N5407			0.3	

* Pulse test : Pulse Width < 300 μs ,Duty Cycle < 2%