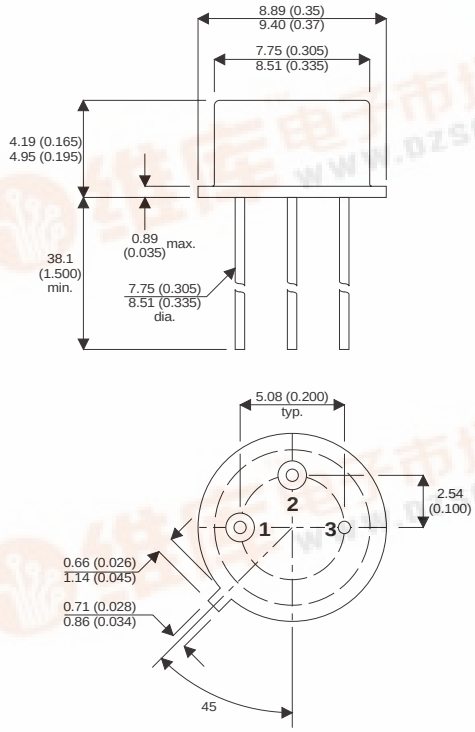
SEME LAB

2N5404
2N5405
2N5406
2N5407

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°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			

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

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

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