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2N5366

Silicon PNP Transistor Audio Power Amplifier TO-92 Type Package

Absolute Maximum Ratings: ($T_C = +25^\circ\text{C}$ unless otherwise specified)

Collector-Emitter Voltage, V_{CEO}	40V
Collector-Base Voltage, V_{CBO}	40V
Emitter-Base Voltage, V_{EBO}	4V
Continuous Collector Current, I_C	500mA
Total Device Dissipation, P_D	625mW
Derate Above $+25^\circ\text{C}$	5mW/ $^\circ\text{C}$
Operating Junction Temperature Range, T_J	-55° to $+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient, R_{thJA}	200 $^\circ\text{C}/\text{W}$

Electrical Characteristics: ($T_C = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}$	40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}$	40	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C = 10\mu\text{A}$	4	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 40\text{V}$	-	-	100	nA
	I_{CES}	$V_{CB} = 40\text{V}$	-	-	100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4\text{V}$	-	-	10	μA
DC Current Gain	h_{FE}	$V_{CE} = 10\text{V}, I_C = 2\text{mA}$	80	-	-	
		$V_{CE} = 1\text{V}, I_C = 50\text{mA}$	100	-	300	
		$V_{CE} = 5\text{V}, I_C = 300\text{mA}$	40	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 2.5\text{mA}$	-	-	0.25	V
		$I_C = 300\text{mA}, I_B = 30\text{mA}$	-	-	1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 2.5\text{mA}$	-	-	1.1	V
		$I_C = 300\text{mA}, I_B = 30\text{mA}$	-	-	2.0	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = 10\text{V}, I_C = 2\text{mA}$	0.5	-	0.8	V
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	-	-	8	pF
Input Capacitance	C_{ib}	$V_{CB} = 500\text{mV}, f = 1\text{MHz}$	-	-	35	pF
Small-Signal Current-Gain	h_{fe}	$V_{CE} = 10\text{V}, I_C = 2\text{mA}, f = 1\text{MHz}$	80	450	-	

