

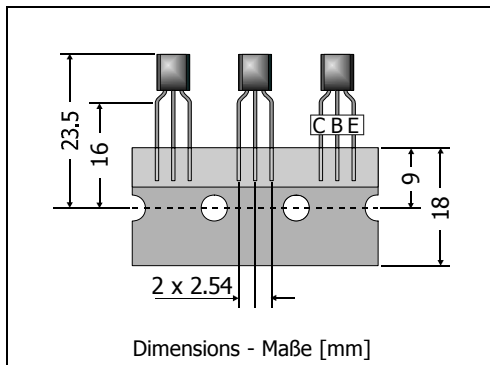
2N5550 / 2N5551

NPN

General Purpose Si-Epitaxial Planar Transistors
Si-Epitaxial Planar-Transistoren für universellen Einsatz

NPN

Version 2006-06-17



Power dissipation
Verlustleistung

625 mW

Plastic case
Kunststoffgehäuse

TO-92
(10D3)

Weight approx. – Gewicht ca.

0.18 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped in ammo pack
Standard Lieferform gegurtet in Ammo-Pack

Maximum ratings ($T_A = 25^\circ\text{C}$)Grenzwerte ($T_A = 25^\circ\text{C}$)

			2N5550	2N5551
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	V_{CE0}	140 V	160 V
Collector-Base-voltage – Kollektor-Basis-Spannung	E open	V_{CB0}	160 V	180 V
Emitter-Base-voltage – Emitter-Basis-Spannung	C open	V_{EB0}	6 V	
Power dissipation – Verlustleistung		P_{tot}	625 mW ¹⁾	
Collector current – Kollektorstrom (dc)		I_C	600 mA	
Junction temperature – Sperrschichttemperatur		T_j	-55...+150°C	
Storage temperature – Lagerungstemperatur		T_s	-55...+150°C	

Characteristics ($T_j = 25^\circ\text{C}$)Kennwerte ($T_j = 25^\circ\text{C}$)

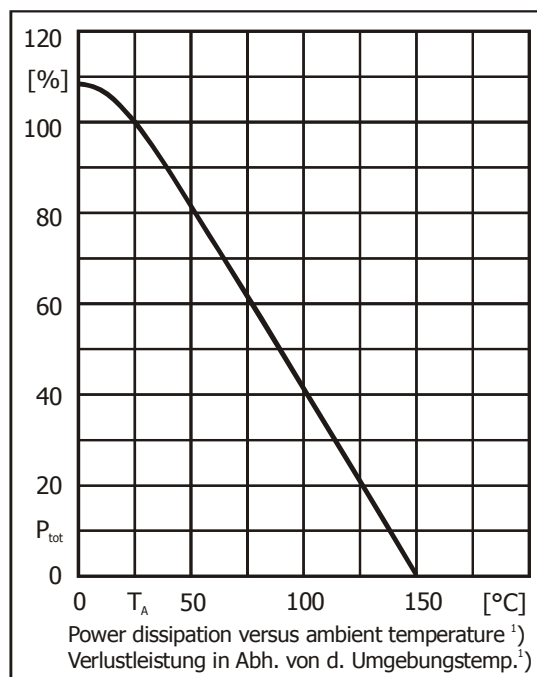
			Min.	Typ.	Max.
DC current gain – Kollektor-Basis-Stromverhältnis ²⁾					
$V_{CE} = 5\text{ V}, I_C = 1\text{ mA}$ $V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$ $V_{CE} = 5\text{ V}, I_C = 50\text{ mA}$	2N5550	h_{FE}	60	–	–
		h_{FE}	60	–	250
		h_{FE}	20	–	–
$V_{CE} = 5\text{ V}, I_C = 1\text{ mA}$ $V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$ $V_{CE} = 5\text{ V}, I_C = 50\text{ mA}$	2N5551	h_{FE}	80	–	–
		h_{FE}	80	–	250
		h_{FE}	30	–	–
Collector-Emitter saturation voltage – Kollektor-Emitter-Sättigungsspg. ²⁾					
$I_C = 10\text{ mA}, I_B = 1\text{ mA}$	2N5550	V_{CEsat}	–	–	0.15 V
	2N5551	V_{CEsat}	–	–	0.15 V
$I_C = 50\text{ mA}, I_B = 5\text{ mA}$	2N5550	V_{CEsat}	–	–	0.25 V
	2N5551	V_{CEsat}	–	–	0.20 V

- 1 Valid, if leads are kept at ambient temperature at a distance of 2 mm from case
Gültig wenn die Anschlussdrähte in 2 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden
- 2 Tested with pulses $t_p = 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$ – Gemessen mit Impulsen $t_p = 300\text{ }\mu\text{s}$, Schaltverhältnis $\leq 2\%$

Characteristics ($T_j = 25^\circ\text{C}$)

 Kennwerte ($T_j = 25^\circ\text{C}$)

		Min.	Typ.	Max.
Base-Emitter saturation voltage – Basis-Emitter-Sättigungsspannung ²⁾				
$I_C = 10\text{ mA}, I_B = 1\text{ mA}$	2N5550	V_{BEsat}	–	–
$I_C = 50\text{ mA}, I_B = 5\text{ mA}$		V_{BEsat}	–	1.0 V
$I_C = 10\text{ mA}, I_B = 1\text{ mA}$	2N5551	V_{BEsat}	–	–
$I_C = 50\text{ mA}, I_B = 5\text{ mA}$		V_{BEsat}	–	1.0 V
Collector-Base cutoff current – Kollektor-Base-Reststrom				
$V_{CB} = 100\text{ V}, (E\text{ open})$	2N5550	I_{CBO}	–	–
$V_{CB} = 120\text{ V}, (E\text{ open})$	2N5551	I_{CBO}	–	100 nA
Emitter-Base cutoff current – Emitter-Basis-Reststrom				
$V_{EB} = 4\text{ V}, (C\text{ open})$		I_{EBO}	–	–
Gain-Bandwidth Product – Transitfrequenz				
$I_C = 10\text{ mA}, V_{CE} = 10\text{ V}, f = 100\text{ MHz}$		f_T	100 MHz	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität				
$V_{CB} = 10\text{ V}, I_E = i_e = 0, f = 1\text{ MHz}$		C_{CBO}	–	–
Noise figure – Rauschzahl				
$V_{CE} = 5\text{ V}, I_C = 200\text{ }\mu\text{A}, R_G = 2\text{ k}\Omega,$	2N5550	F	–	–
$f = 30\text{ Hz} \dots 15\text{ kHz}$	2N5551	F	–	10 dB
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft				
		R_{thA}	< 200 K/W ¹⁾	
Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren				
2N5400 / 2N5401				



¹ Valid, if leads are kept at ambient temperature at a distance of 2 mm from case
Gültig wenn die Anschlussdrähte in 2 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden