



DESCRIPTION

The 2N5551 is available in TO-92 package

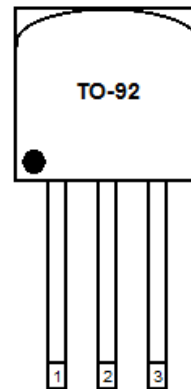
FEATURES

- General Purpose Switching Application
- Available in TO-92 package

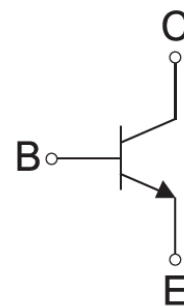
ORDERING INFORMATION

Package Type	Part Number
TO-92 SPQ: 2,000pcs/Box SPQ: 1,000pcs/Bag	2N5551-A 2N5551-B 2N5551-C
$h_{FE(2)}$	2N5551-A = 100~150 2N5551-B = 150~200 2N5551-C = 200~300
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



Equivalent Circuit



1. EMITTER
2. BASE
3. COLLECTOR



ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise noted

V _{CBO} , Collector-Base Voltage	180V
V _{CEO} , Collector-Emitter Voltage	160V
V _{EBO} , Emitter-Base Voltage	6V
I _C , Collector Current	0.6A
P _C , Collector Power Dissipation	625mW
R _{θJA} , Thermal Resistance From Junction To Ambient	200°C/W
T _J , T _{STG} , Operation Junction and Storage Temperature Range	-55°C ~+150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	180	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO} ^{NOTE1}	I _C =1mA, I _B =0	160	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	6	-	-	V
Collector Cut-Off Current	I _{CBO}	V _{CB} =120V, I _E =0	-	-	50	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =4V, I _C =0	-	-	50	nA
DC Current Gain	h _{FE(1)}	V _{CE} =5V, I _C =1mA	80	-	-	-
	h _{FE(2)}	V _{CE} =5V, I _C =10mA	A	100	-	150
			B	150	-	200
			C	200	-	300
Collector-Emitter Saturation Voltage	V _{CE(sat)} (1)	I _C =10mA, I _B =1mA	-	-	0.15	V
	V _{CE(sat)} (2)	I _C =50mA, I _B =5mA	-	-	0.2	V
Base-Emitter Saturation Voltage	V _{BE(sat)} (1)	I _C =10mA, I _B =1mA	-	-	1	V
	V _{BE(sat)} (2)	I _C =50mA, I _B =5mA	-	-	1	V
Collector Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	-	6	pF
Emitter Input Capacitance	C _{ib}	V _{BE} =0.5V, I _C =0, f=1MHz	-	-	20	pF
Transition Frequency	f _T	V _{CE} =10V, I _C =10mA, f=100MHz	100	-	300	MHz

NOTE1: Pulse test: pulse width ≤300μs, duty cycle ≤2.0%.



TYPICAL CHARACTERISTICS

Figure 1. Static Characteristic

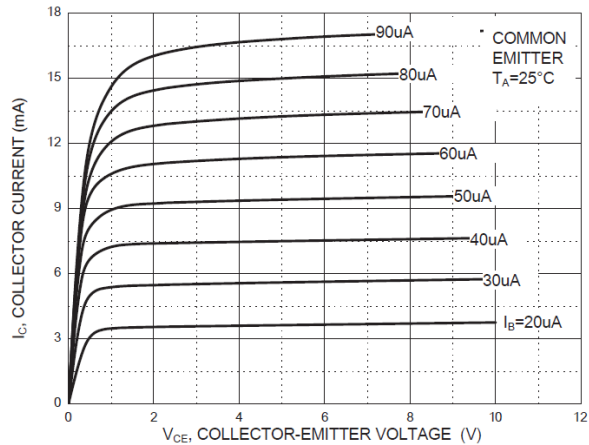


Figure 2. h_{FE} — I_C

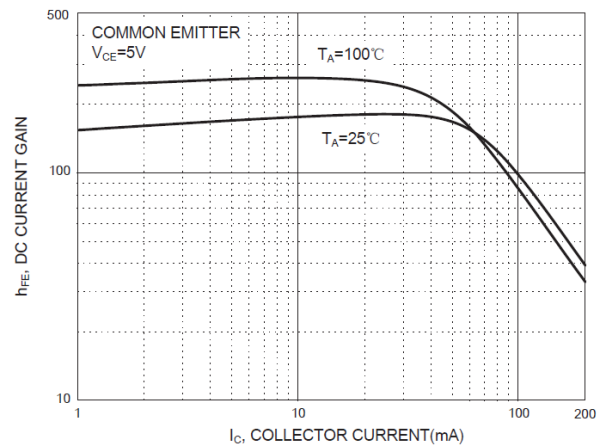


Figure 3. V_{BEsat} — I_C

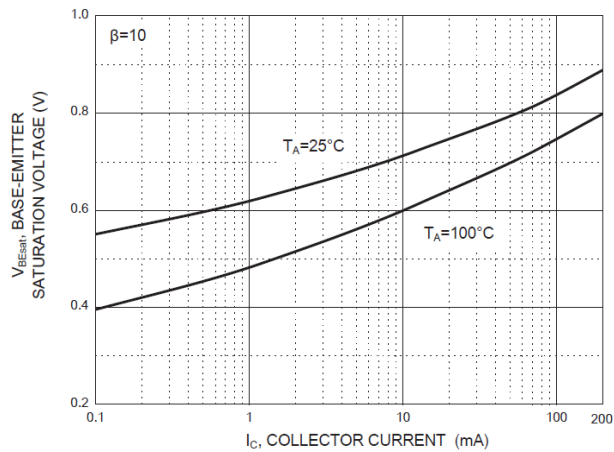


Figure 4. V_{CEsat} — I_C

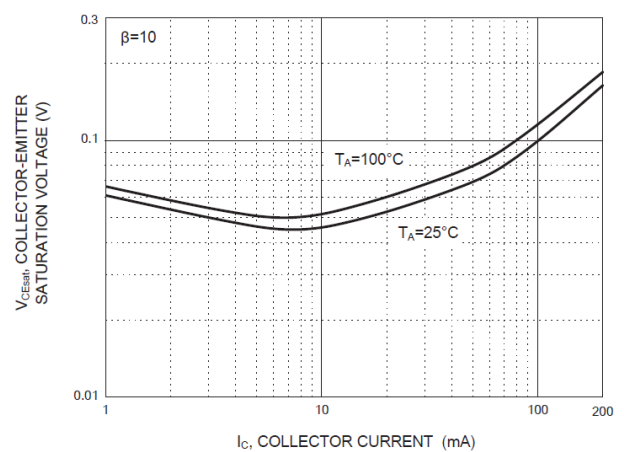




Figure 5. V_{BE} — I_C

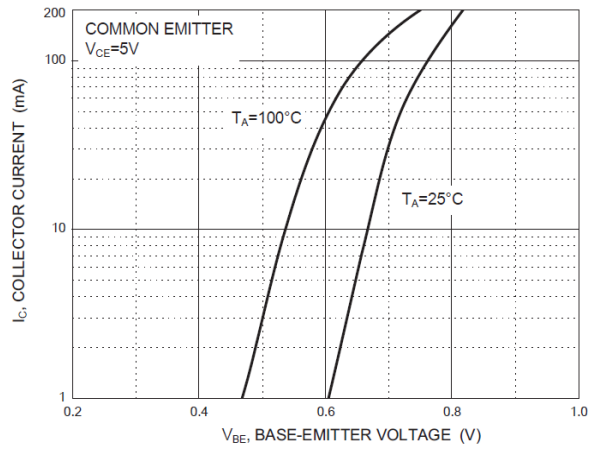


Figure 6. C_{ob}/C_{ib} — V_{CB}/V_{EB}

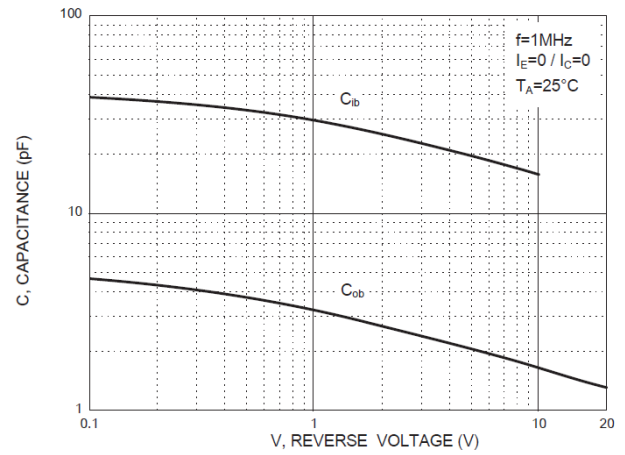


Figure 7. f_T — I_C

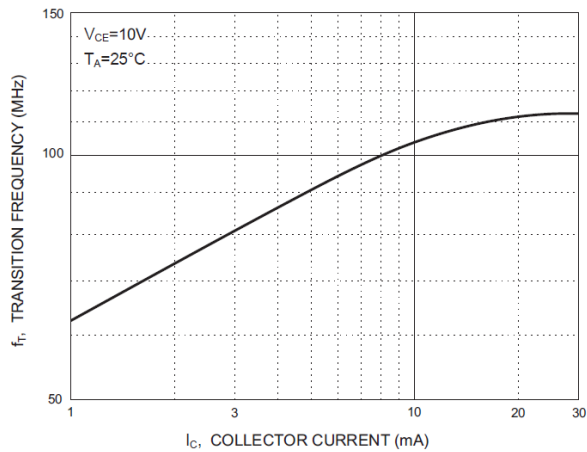
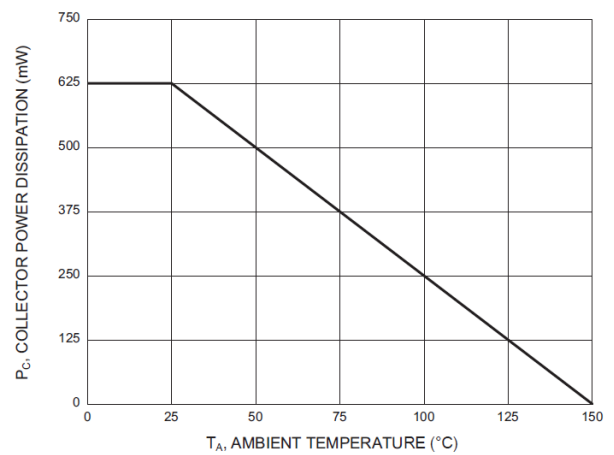


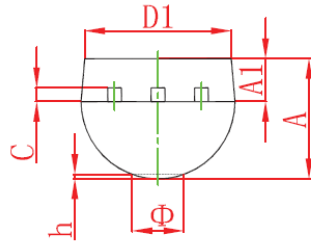
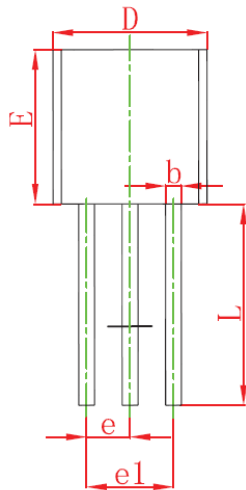
Figure 8. P_C — T_A



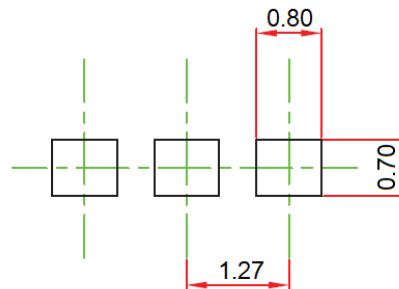


PACKAGE INFORMATION

Dimension in TO-92 (Unit: mm)



Suggested Pad Layout



Symbol	MILLMETERS		INCHES	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430	-	0.135	-
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ	-	1.600	-	0.063
h	0.000	0.380	0.000	0.015



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