



DESCRIPTION

The 2N5551 is available in TO-92 package

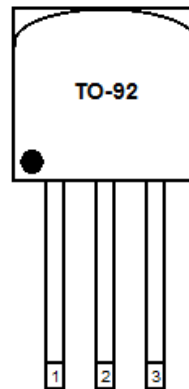
ORDERING INFORMATION

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

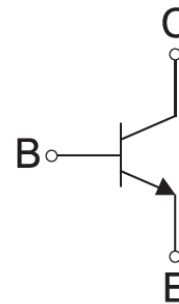
FEATURES

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

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	
h _{FE(3)}	V _{CE} =5V, I _C =50mA	50	-	-			
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

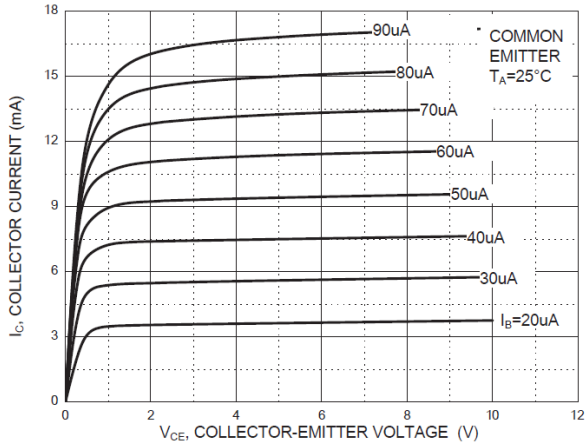


Figure 2. $h_{FE} \text{ --- } I_C$

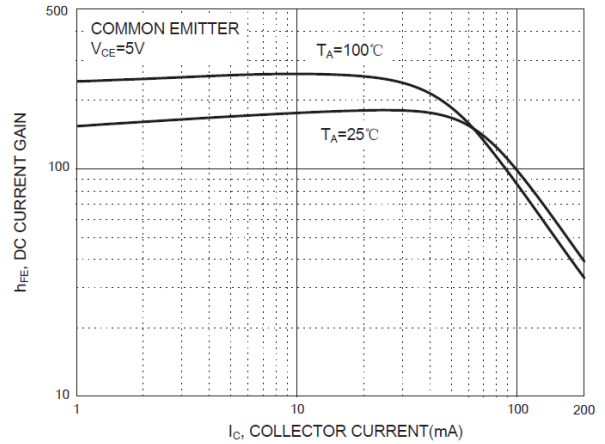


Figure 3. $V_{BEsat} \text{ --- } I_C$

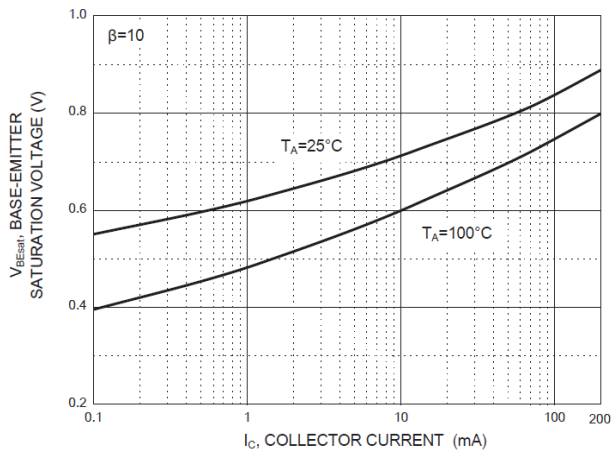


Figure 4. $V_{CEsat} \text{ --- } I_C$

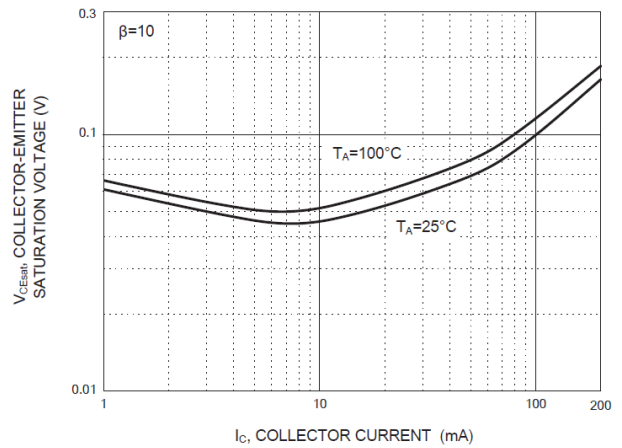




Figure 5. $V_{BE} - I_C$

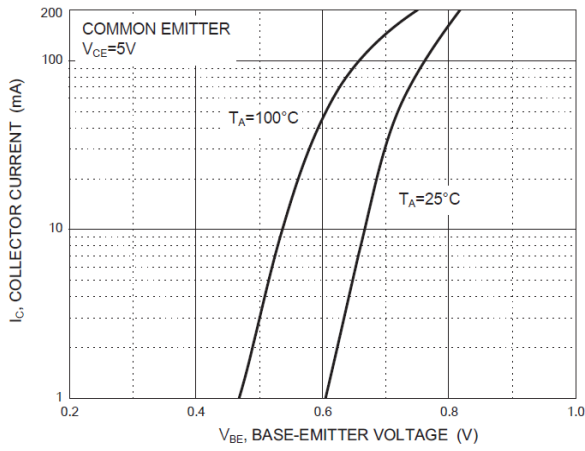


Figure 6. $C_{ob}/C_{ib} - V_{CB}/V_{EB}$

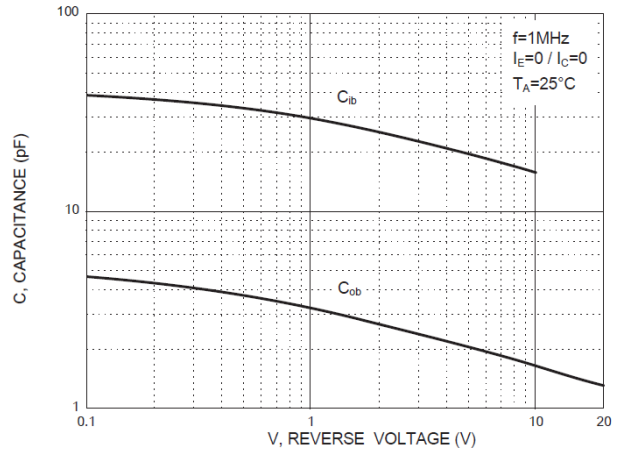


Figure 7. $f_T - I_C$

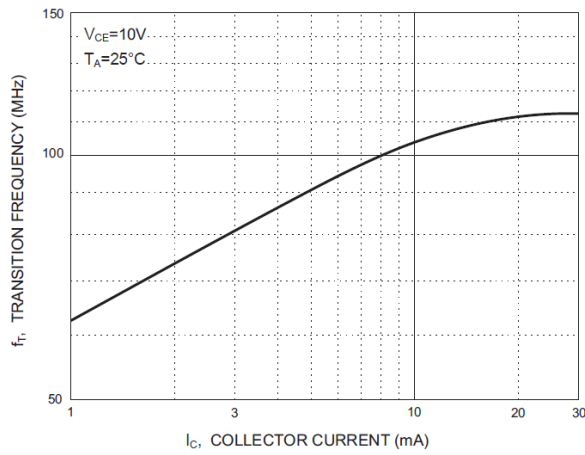
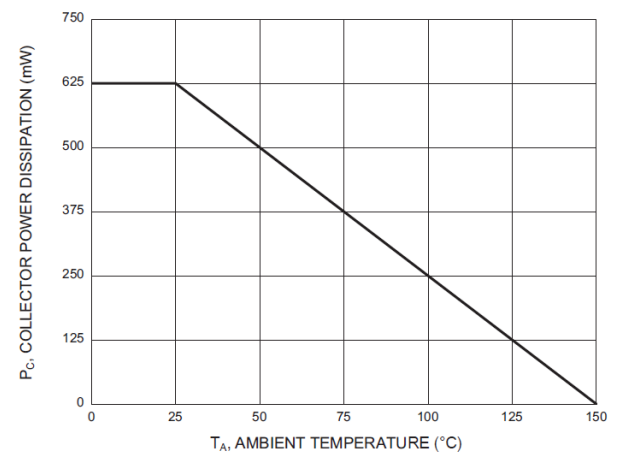


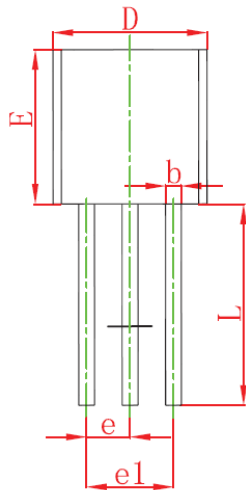
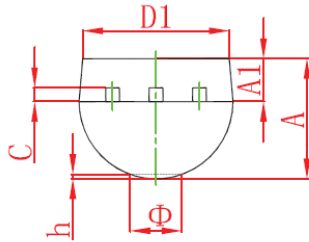
Figure 8. $P_C - T_A$



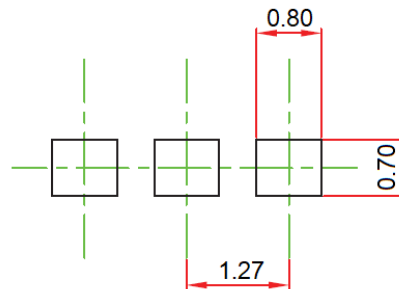


PACKAGE INFORMATION

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



IMPORTANT NOTICE

AiT Semiconductor Inc. (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Semiconductor Inc.'s integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or severe property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Semiconductor Inc. assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.