

REPLACEMENT TYPE :2N5551
FEATURES

- General Purpose Switching Application



TO-92

1:EMITTER 2:BASE 3:COLLECTOR

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	180	V
Collector-Emitter Voltage	V _{CEO}	160	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _C	0.6	A
Collector Power Dissipation	P _C	625	mW
Junction Temperature	T _J	150	°C
Thermal Resistance From Junction to Ambient	R _{θJA}	200	°C/W
Storage Temperature	T _{stg}	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

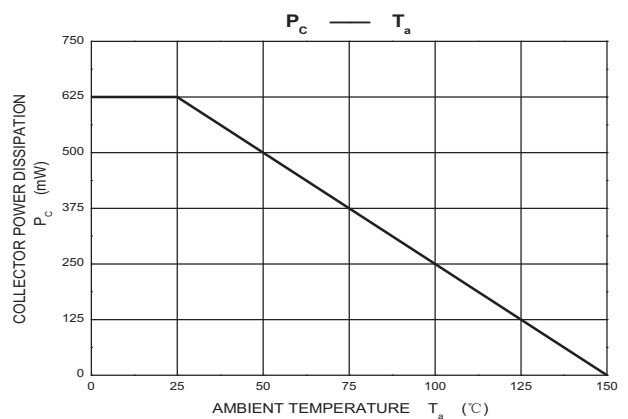
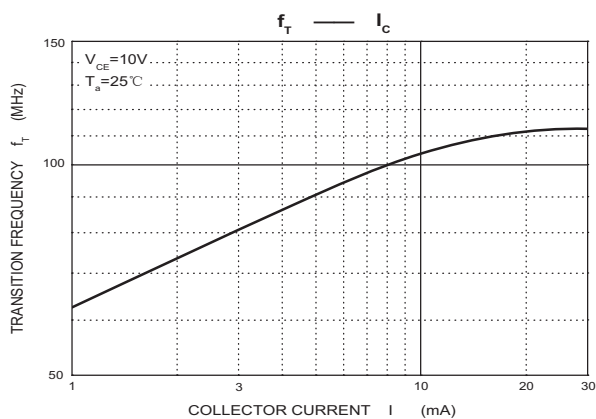
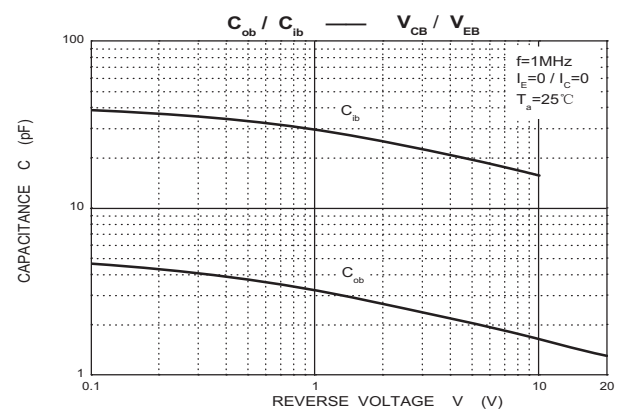
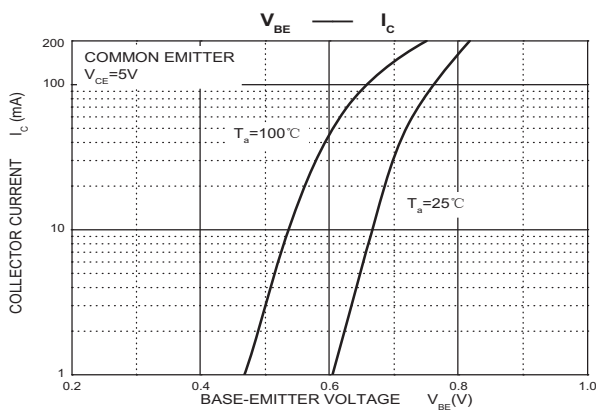
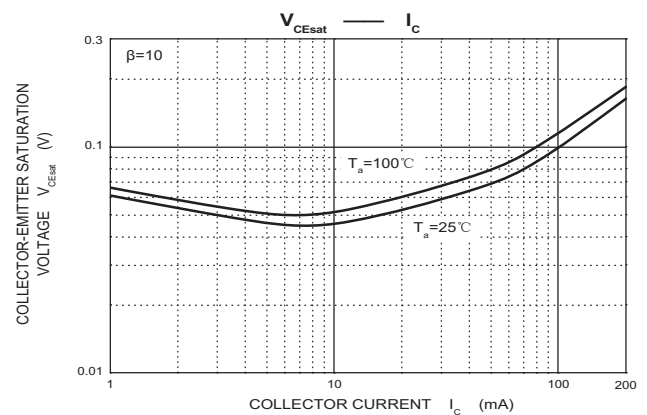
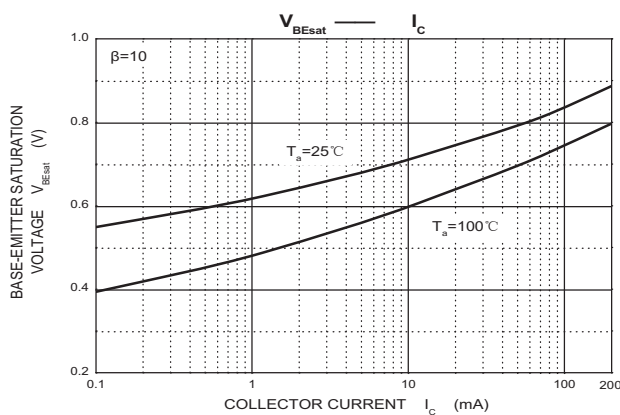
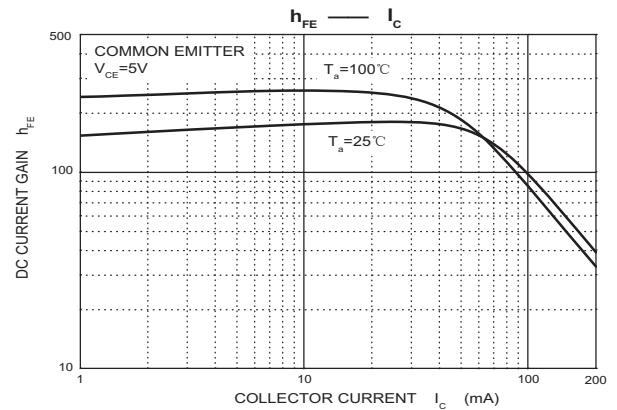
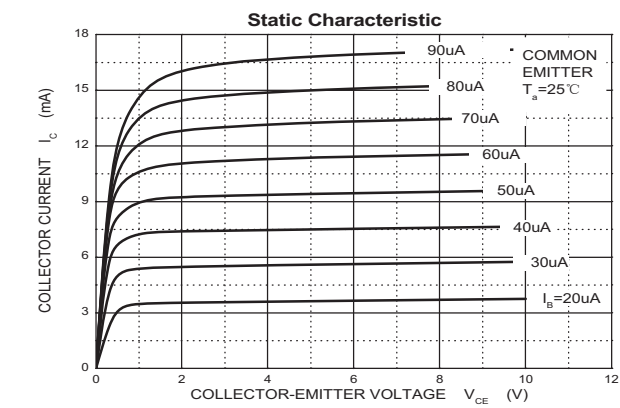
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V _{CB0}	I _C =100μA, I _E =0	180			V
Collector-Emitter Breakdown Voltage	V _{CEO}	I _C =1mA, I _B =0	160			V
Emitter-Base Breakdown Voltage	V _{EBO}	I _E =10μA, I _C =0	6			V
Collector Cut-off Current	I _{CB0}	V _{CB} =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	80		300	
	h _{FE(3)}	V _{CE} =5V, I _C =50mA	50			
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA			0.15	V
	V _{CE(sat)}	I _C =50mA, I _B =5A			0.2	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =10mA, I _B =1mA			1	V
	V _{BE(sat)}	I _C =50mA, I _B =5A			1	V
Transition Frequency	f _T	V _{CE} =5V, I _C =10mA, f=30MHz	100		300	MHz
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

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

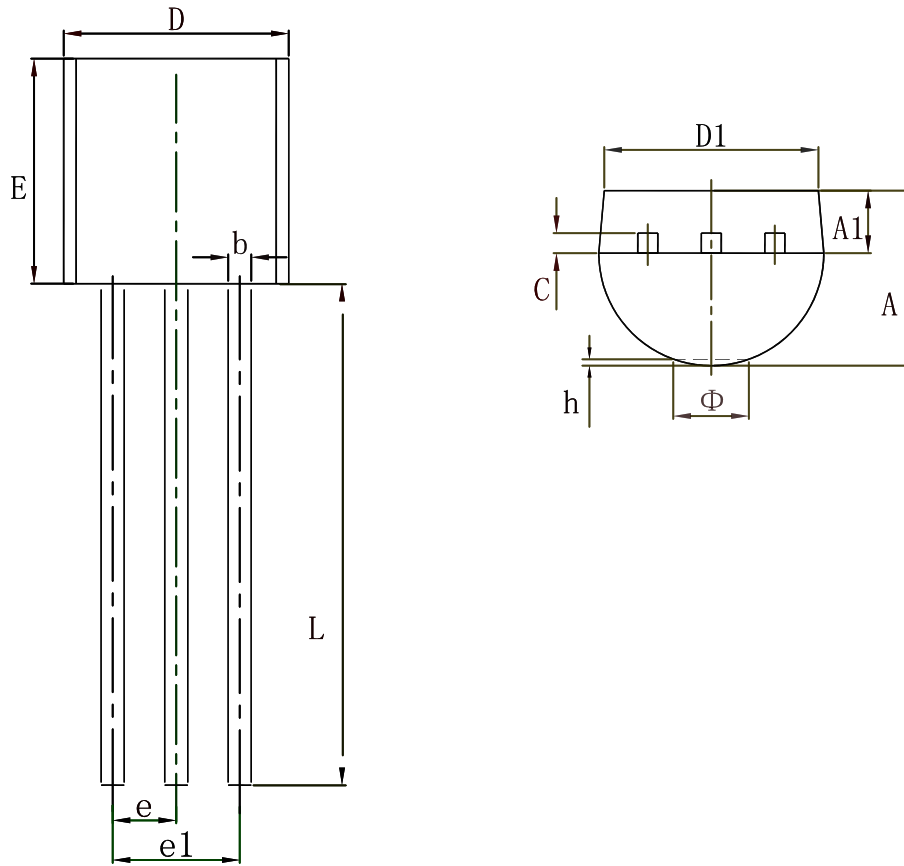
CLASSIFICATION OF h_{FE}

Rank		A	B	C
Range	80-100	100-150	150-200	200-300

Typical Characteristics

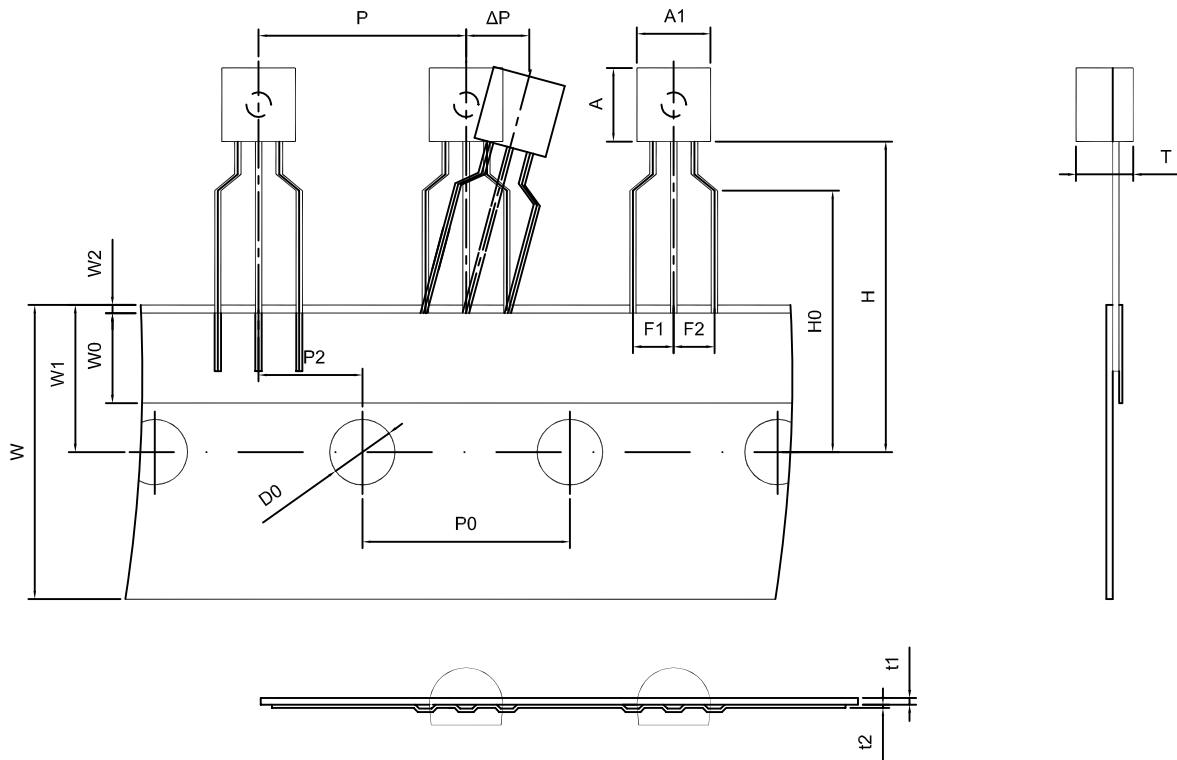


TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In 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

TO-92 Package Taping Dimension



Dimensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.5±0.2	4.5±0.2	3.5±0.2	12.7±0.3	12.7±0.2	6.35±0.3	2.5±0.3	2.5±0.3	18.0+1.0/-0.5
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0±0.5	9.0±0.5	1.0 MAX.	19.0±1.0	16.0±0.5	4.0±0.5	0.4±0.05	0.2±0.05	0 ± 1.0

