



2N5551

NPN SILICON TRANSISTOR

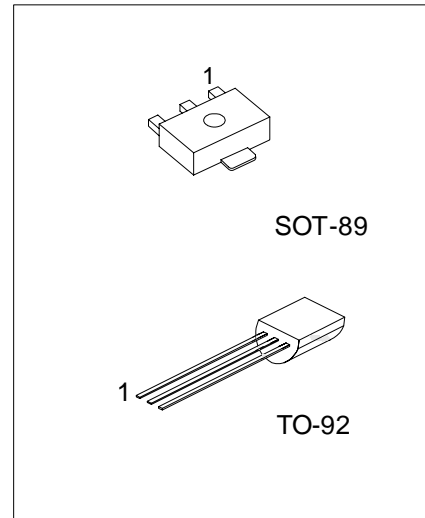
HIGH VOLTAGE SWITCHING TRANSISTOR

■ FEATURES

- * High collector-emitter voltage:
 $V_{CE0}=160V$
- * High current gain

■ APPLICATIONS

- * Telephone switching circuit
- * Amplifier



*Pb-free plating product number: 2N5551L

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2N5551-x-AB3-R	2N5551L-x-AB3-R	SOT-89	B	C	E	Tape Reel
2N5551-x-T92-B	2N5551L-x-T92-B	TO-92	E	B	C	Tape Box
2N5551-x-T92-K	2N5551L-x-T92-K	TO-92	E	B	C	Bulk

<p>2N5551L-x-AB3-R</p>	<p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Rank</p> <p>(4)Lead Plating</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel</p> <p>(2) T92: TO-92, AB3: SOT-89</p> <p>(3) x: refer to Classification of h_{FE}</p> <p>(4) L: Lead Free Plating, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25 , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V _{CBO}	180	V
Collector-Emitter Voltage	V _{CEO}	160	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Dissipation	P _C	625	mW
Collector Dissipation		500	mW
Collector Current	I _C	600	mA
Junction Temperature	T _J	+150	
Storage Temperature	T _{STG}	-55 ~ +150	

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25 , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CBO}	I _C =100μA, I _E =0	180			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =1mA, I _B =0	160			V
Emitter-Base Breakdown Voltage	BV _{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 _{BE} =4V, I _C =0			50	nA
DC Current Gain(Note)	h _{FE1}	V _{CE} =5V, I _C =1mA	80	160	400	
	h _{FE2}	V _{CE} =5V, I _C =10mA	80			
	h _{FE3}	V _{CE} =5V, I _C =50mA	80			
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =10mA, I _B =1mA I _C =50mA, I _B =5mA			0.15 0.2	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =10mA, I _B =1mA I _C =50mA, I _B =5mA			1 1	V
Current Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =10mA, f=100MHz	100		300	MHz
Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0 f=1MHz			6.0	pF
Noise Figure	NF	I _C =0.25mA, V _{CE} =5V R _S =1kΩ, f=10Hz ~ 15.7kHz			8	dB

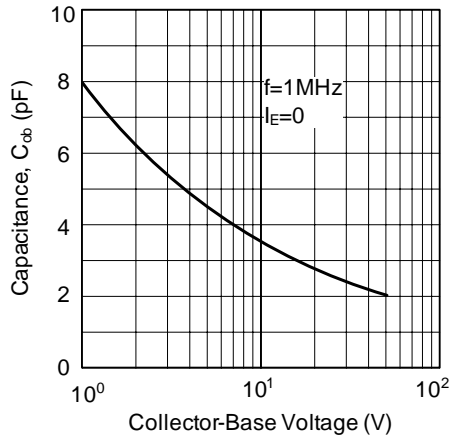
Note: Pulse test: PW<300μs, Duty cycle<2%

■ CLASSIFICATION OF h_{FE}

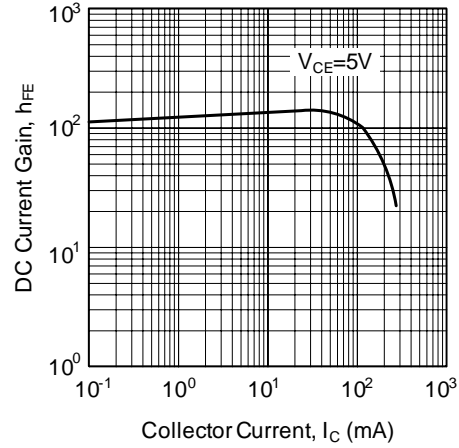
RANK	A	B	C
RANGE	80-170	150-240	200-400

■ TYPICAL CHARACTERISTICS

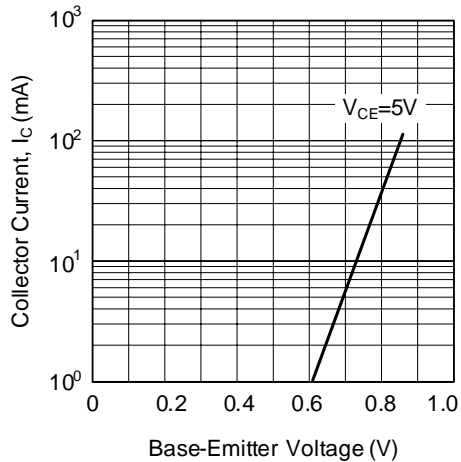
Collector Output Capacitance



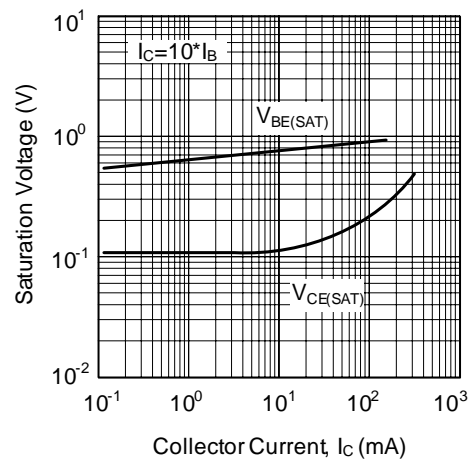
DC Current Gain



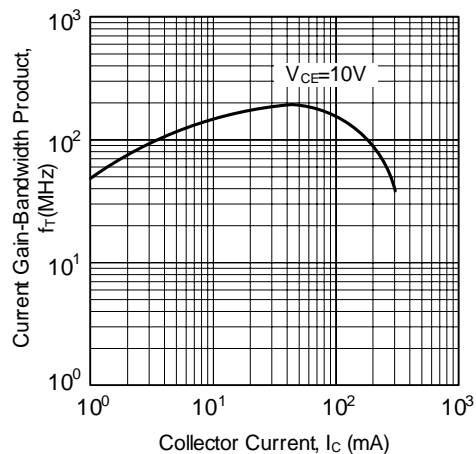
Base-Emitter on Voltage



Saturation Voltage



Current Gain-Bandwidth Product



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