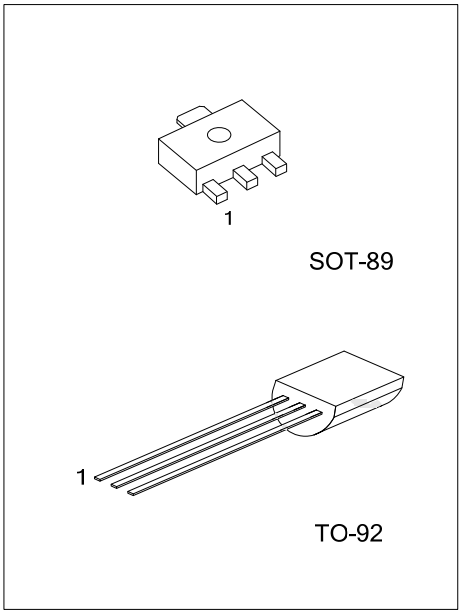
2N5551

NPN SILICON TRANSISTOR

HIGH VOLTAGE SWITCHING TRANSISTOR



■ FEATURES

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

■ APPLICATIONS

* Telephone switching circuit
* Amplifier

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free Plating	Halogen Free		1	2	3	
2N5551L-x-AB3-R	2N5551G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2N5551L-x-T92-B	2N5551G-x-T92-B	TO-92	E	B	C	Tape Box
2N5551L-x-T92-K	2N5551G-x-T92-K	TO-92	E	B	C	Bulk
2N5551L-x-T92-A-B	2N5551G-x-T92-A-B	TO-92	E	C	B	Tape Box
2N5551L-x-T92-A-K	2N5551G-x-T92-A-K	TO-92	E	C	B	Bulk

Note: Pin Assignment: B: Base C: Collector E: Emitter

2N5551L-x-T92-A-B (1)Packing Type (2)Pin Assignment (3)Package Type (4)Rank (5)Lead Free	(1) B: Tape Box, K: Bulk, R: Tape Reel (2) refer to Pin Assignment (3) AB3: SOT-89, T92: TO-92 (4) x: refer to Classification of h_{FE2} (5) L: Lead Free, G: Halogen Free

■ MARKING INFORMATION

PACKAGE	MARKING
SOT-89	□□□□ 2N5551□ 1 Data Code L: Lead Free P: Halogen Free
TO-92	UTC 2N5551□ □ □□□ Rank 1 L: Lead Free G: Halogen Free Data Code

Copyright © 2014 Unisonic Technologies Co., Ltd

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, 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	TO-92	P_C	625	mW
Collector Dissipation	SOT-89		500	mW
Collector Current		I_C	600	mA
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

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 (T_A=25°C, 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			
	h_{FE2}	V_{CE}=5V, I_C=10mA	80	160	400	
	h_{FE3}	V_{CE}=5V, I_C=50mA	80			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=10mA, I_B=1mA			0.15	V
		I_C=50mA, I_B=5mA			0.2	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=10mA, I_B=1mA			1	V
		I_C=50mA, I_B=5mA			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

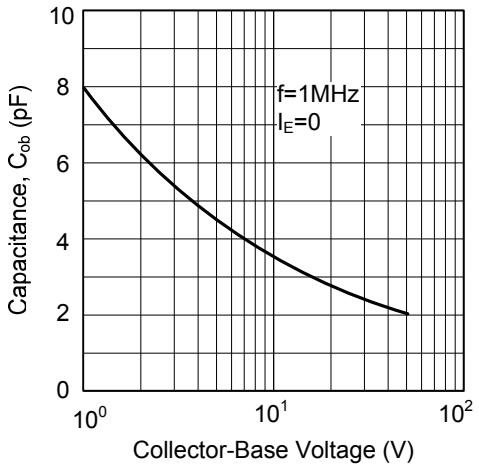
Note: Pulse test: PW<300μs, Duty cycle<2%

■ CLASSIFICATION OF h_{FE2}

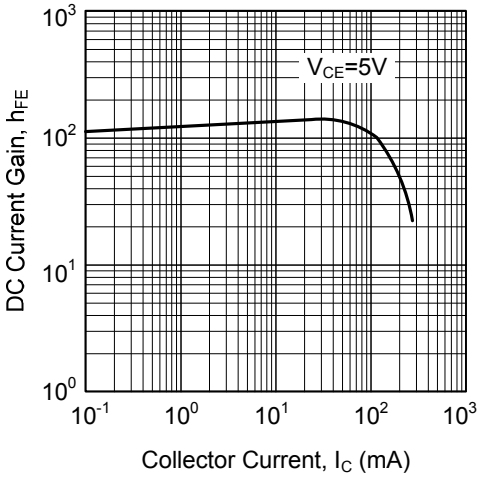
RANK	A	B	C
RANGE	80-170	150-240	200-400

■ TYPICAL CHARACTERISTICS

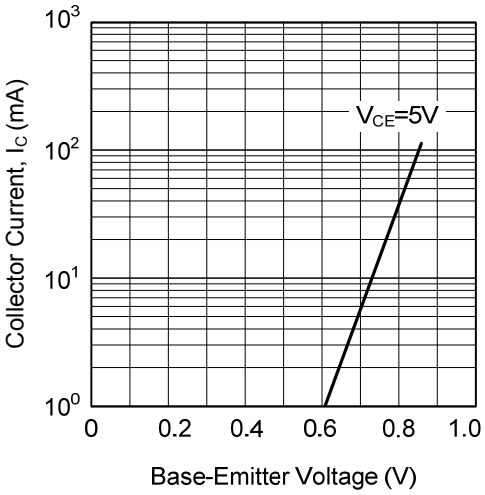
Collector Output Capacitance



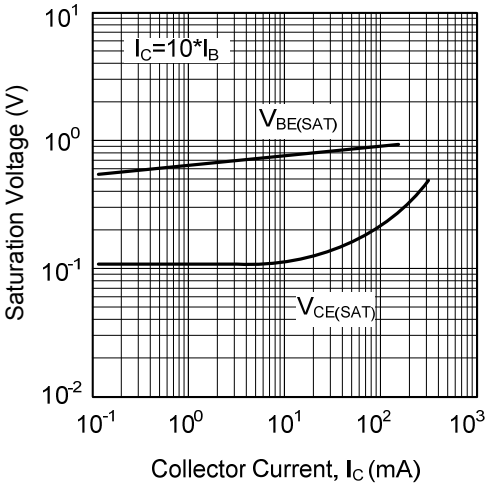
DC Current Gain



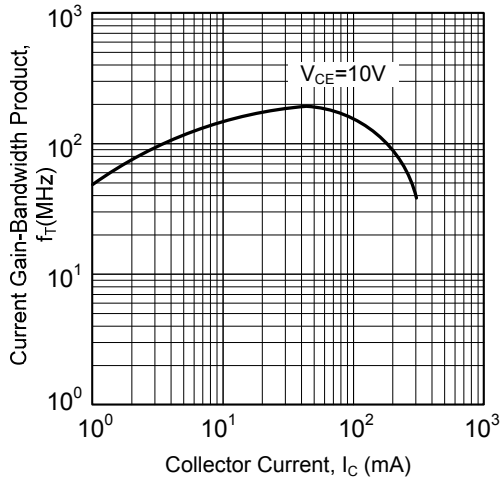
Base-Emitter on Voltage



Saturation Voltage



Current Gain-Bandwidth Product



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.