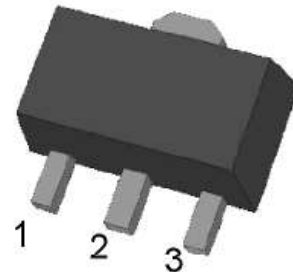


## High Voltage Transistors

### DESCRIPTION & FEATURES

High Breakdown Voltage( $BV_{CBO}=180V$ )



### PIN ASSIGNMENT

PIN NAME	PIN NUMBER	FUNCTION
	SOT-89	
B	1	BASE
C	2	COLLECTOR
E	3	EMITTER

DEVICE MARKING: SXT5551=G1

### MAXIMUM RATINGS( $T_a=25^\circ C$ )

CHARACTERISTIC	Symbol	Rating	Unit
Collector-Emitter Voltage	$V_{CEO}$	160	Vdc
Collector-Base Voltage	$V_{CBO}$	180	Vdc
Emitter-Base Voltage	$V_{EBO}$	6.0	Vdc
Collector Current	$I_C$	0.6	Adc

### THERMAL CHARACTERISTICS

CHARACTERISTIC	Symbol	Max	Unit
Total power dissipation ( $T_{amb} = 25^\circ C$ ;) )	PD	0.5	W
Junction and Storage Temperature	$T_j$ , $T_{stg}$	150, -65~150	$^\circ C$
Operating ambient temperature	$T_{amb}$	-65~150	$^\circ C$

### SMALL-SIGNAL CHARACTERISTICS

Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Transition Frequency	fT	$V_{CE}=10V, I_E=10mA,$ $f=100MHz$	100	—	300	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	—	—	6	pF
Noise Figure	NF	$V_{CE}=5.0Vdc, I_C=0.2mA$ $R_S=10\Omega, f=10Hz$ to $15.7KHz$	—	—	8.0	dB

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)**

Characteristic	Symbol	Test Condition	Min	Max	Unit
collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> =120Vdc, I <sub>E</sub> =0	—	50	nA
emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4.0Vdc, I <sub>C</sub> =0	—	50	nA
CollectorEmitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1.0 mAdc, I <sub>B</sub> =0	160	—	Vdc
CollectorBase Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100 μ Adc, I <sub>E</sub> =0	180	—	Vdc
EmitterBase Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10 μ Adc, I <sub>C</sub> =0	6.0	—	Vdc
DC current gain	h <sub>FE</sub>	I <sub>C</sub> =1.0mAdc, V <sub>CE</sub> =5.0Vdc	80	—	—
		I <sub>C</sub> =10mAdc, V <sub>CE</sub> =5.0Vdc	80	360	—
		I <sub>C</sub> =50mAdc, V <sub>CE</sub> =5.0Vdc	30	—	—
collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mAdc, I <sub>B</sub> =1.0mAdc	—	0.15	Vdc
		I <sub>C</sub> =50mAdc, I <sub>B</sub> =5.0mAdc	—	0.2	Vdc
BaseEmitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =10mAdc, I <sub>B</sub> =1.0mAdc	—	1.0	Vdc
		I <sub>C</sub> =50mAdc, I <sub>B</sub> =5.0mAdc	—	1.0	Vdc

**SOT-89 (SOT-89 DIMENSION)**

