



# HE8550

## PNP SILICON TRANSISTOR

### LOW VOLTAGE HIGH CURRENT SMALL SIGNAL PNP TRANSISTOR

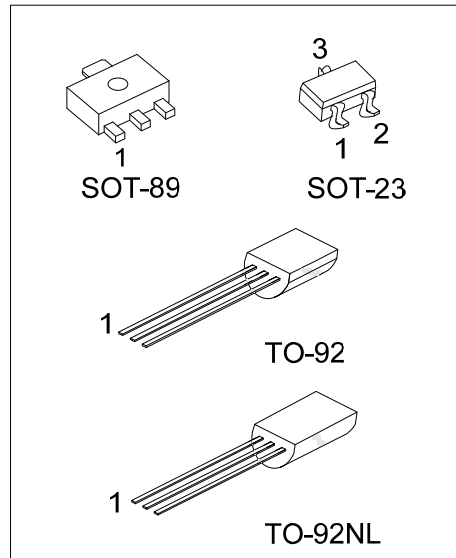
■ DESCRIPTION

The UTC **HE8550** is a low voltage high current small signal PNP transistor, designed for Class B push-pull 2W audio amplifier for portable radio and general purpose applications.

■ FEATURES

- \* Collector Current up to 1.5A
- \* Collector-Emitter Voltage up to 25V
- \* Complimentary to UTC **HE8050**

■ ORDERING INFORMATION



Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
HE8550L-x-AB3-R	HE8550G-x-AB3-R	SOT-89	B	C	E	Tape Reel
HE8550L-x-AE3-R	HE8550G-x-AE3-R	SOT-23	B	E	C	Tape Reel
HE8550L-x-T92-B	HE8550G-x-T92-B	TO-92	E	C	B	Tape Box
HE8550L-x-T92-K	HE8550G-x-T92-K	TO-92	E	C	B	Bulk
HE8550L-x-T9N-B	HE8550G-x-T9N-B	TO-92NL	E	C	B	Tape Box
HE8550L-x-T9N-K	HE8550G-x-T9N-K	TO-92NL	E	C	B	Bulk

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

<p>HE8550G-x-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AB3: SOT-89, AE3: SOT-23, T92: TO-92, T9N: TO-92NL (3) x: refer to Classification of <math>h_{FE2}</math> (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-89	SOT-23
TO-92	TO-92NL

■ ABSOLUTE MAXIMUM RATING ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CBO}$	-40	V
Collector-Emitter Voltage		$V_{CEO}$	-25	V
Emitter-Base Voltage		$V_{EBO}$	-6	V
Collector Dissipation	SOT-23	$P_C$	350	mW
	SOT-89		0.5	W
	TO-92/TO-92NL		1	W
Collector Current		$I_C$	-1.5	A
Junction Temperature		$T_J$	+150	$^{\circ}\text{C}$
Storage Temperature		$T_{STG}$	-65 ~ +150	$^{\circ}\text{C}$

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.

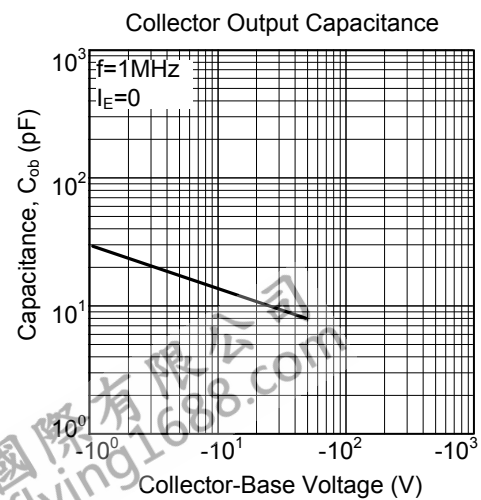
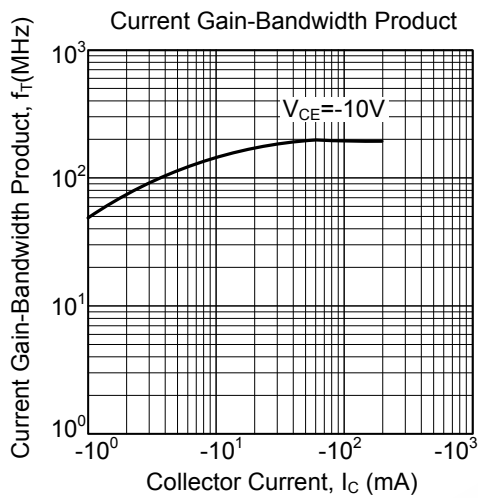
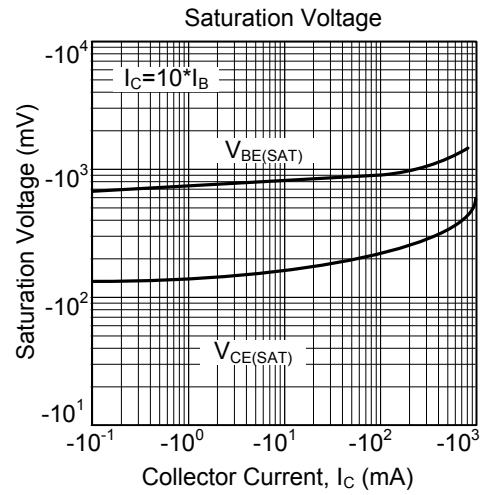
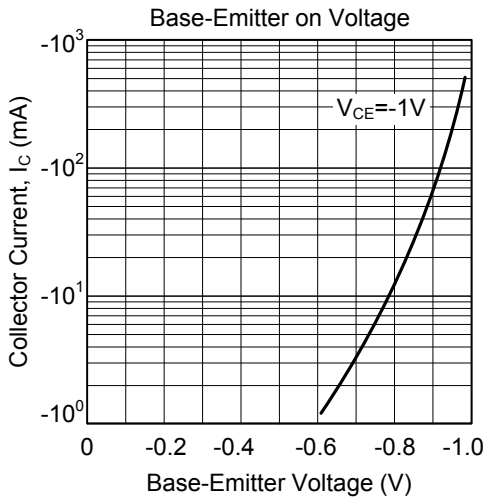
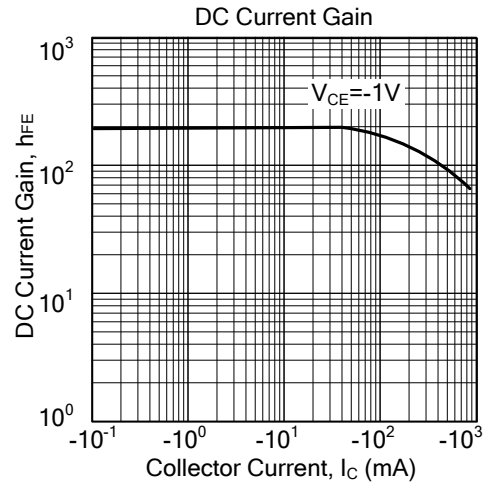
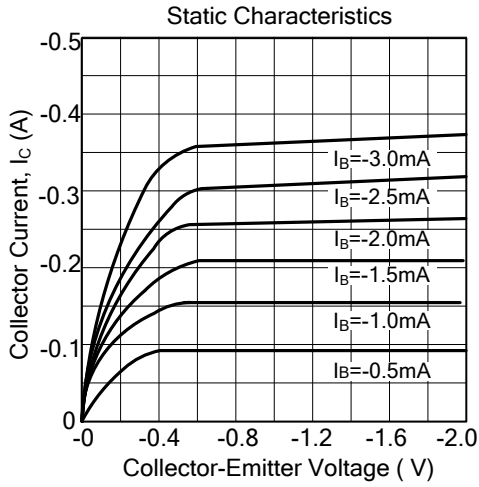
■ ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C=-100\mu\text{A}$ , $I_E=0$	-40			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=-2\text{mA}$ , $I_B=0$	-25			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=-100\mu\text{A}$ , $I_C=0$	-6			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-35\text{V}$ , $I_E=0$			-100	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-6\text{V}$ , $I_C=0$			-100	nA
DC Current Gain	$h_{FE1}$	$V_{CE}=-1\text{V}$ , $I_C=-5\text{mA}$	45	170		
	$h_{FE2}$	$V_{CE}=-1\text{V}$ , $I_C=-100\text{mA}$	85	160	500	
	$h_{FE3}$	$V_{CE}=-1\text{V}$ , $I_C=-800\text{mA}$	40	80		
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-800\text{mA}$ , $I_B=-80\text{mA}$		-0.28	-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=-800\text{mA}$ , $I_B=-80\text{mA}$		-0.98	-1.2	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=-1\text{V}$ , $I_C=-10\text{mA}$		-0.66	-1.0	V
Current Gain Bandwidth Product	$f_T$	$V_{CE}=-10\text{V}$ , $I_C=-50\text{mA}$	100	190		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-10\text{V}$ , $I_E=0$ $f=1\text{MHz}$		9.0		pF

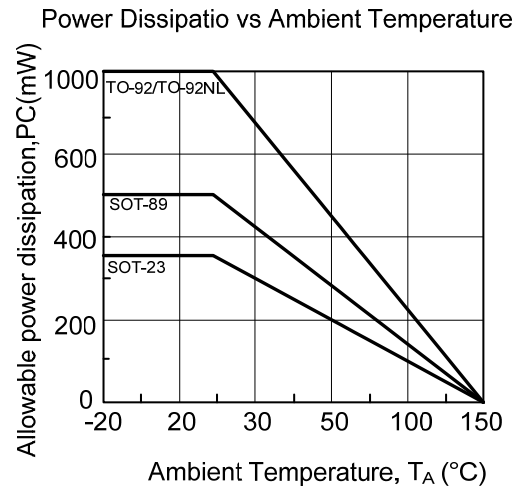
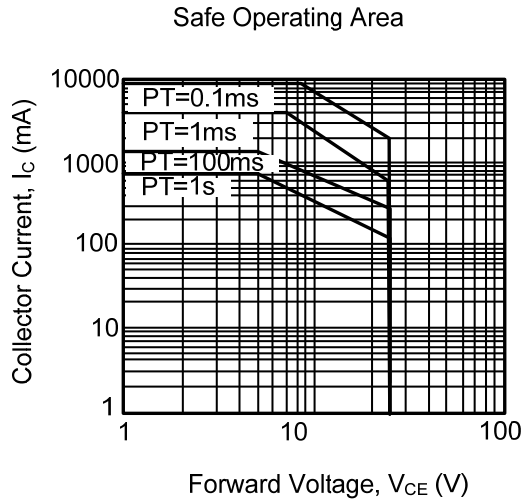
■ CLASSIFICATION OF  $h_{FE2}$

RANK	C	D	E
RANGE	120-200	160-300	250-500

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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