



S8050

NPN SILICON TRANSISTOR

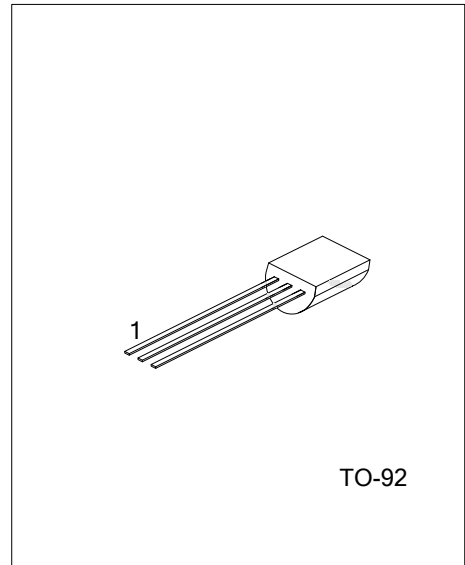
LOW VOLTAGE HIGH CURRENT SMALL SIGNAL NPN TRANSISTOR

DESCRIPTION

The UTC **S8050** is a low voltage high current small signal NPN transistor, designed for Class B push-pull audio amplifier and general purpose applications.

FEATURES

- * Collector current up to 700mA
- * Collector-Emitter voltage up to 20 V
- * Complementary to S8550



Lead-free: S8050L

Halogen-free: S8050G

ORDERING INFORMATION

Order Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
S8050-xx-T92-B	S8050L-xx-T92-B	S8050G-xx-T92-B	TO-92	E	B	C	Tape Box
S8050-xx-T92-K	S8050L-xx-T92-K	S8050G-xx-T92-K	TO-92	E	B	C	Bulk

S8050L-xx-T92-B (1)Packing Type (2)Package Type (3)Rank (4)Lead Plating	(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) xx: refer to Classification of h_{FE2} (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn
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■ ABSOLUTE MAXIMUM RATING (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	700	mA
Collector Dissipation(Ta=25°C)	P_C	1	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ +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.

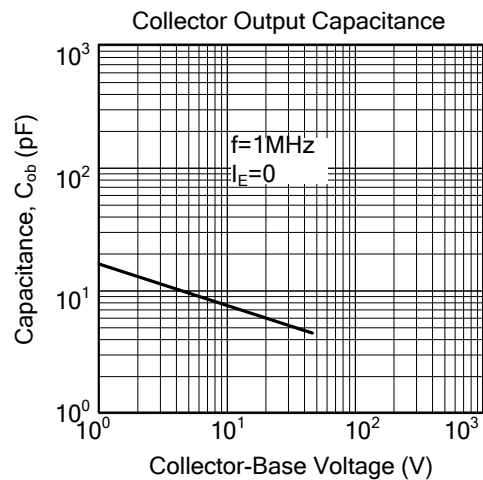
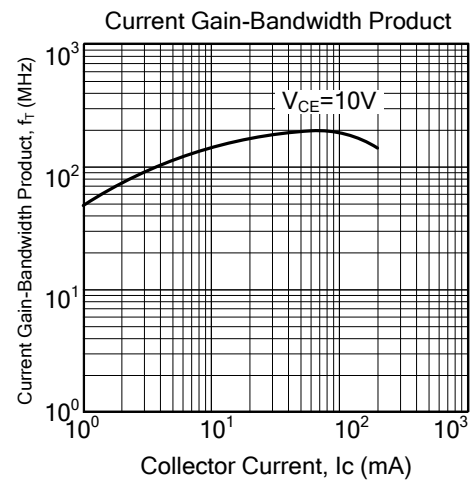
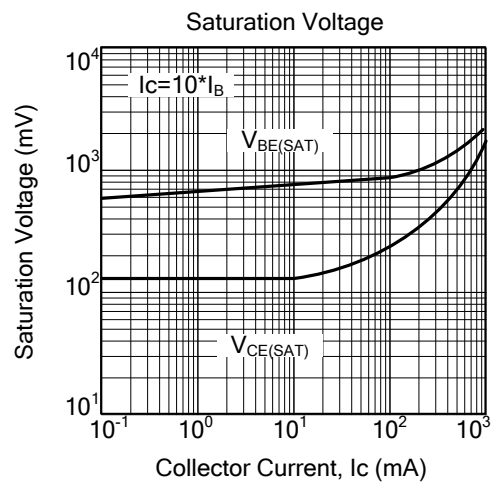
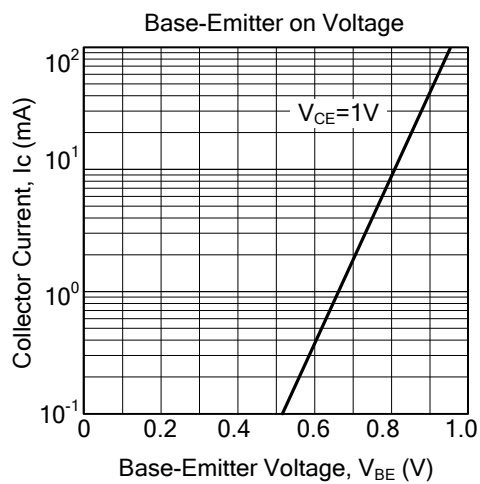
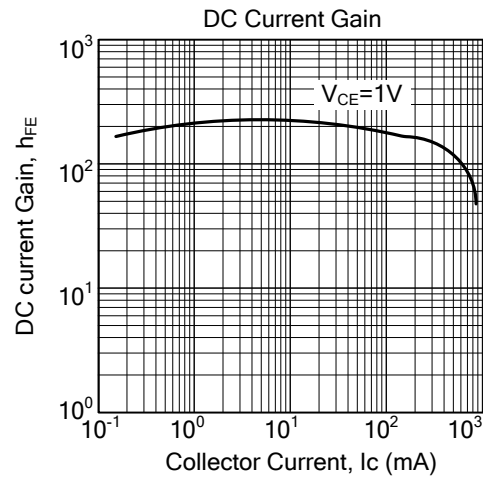
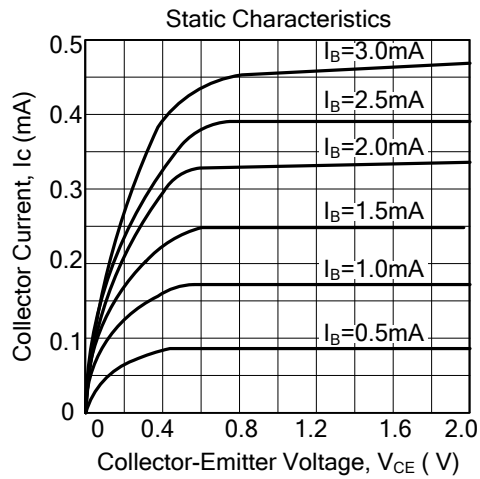
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	30			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA, I_B=0$	20			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V, I_E=0$			1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5V, I_C=0$			100	nA
DC Current Gain	h_{FE1}	$V_{CE}=1V, I_C=1mA$	100			
	h_{FE2}	$V_{CE}=1V, I_C=150mA$	120	110	400	
	h_{FE3}	$V_{CE}=1V, I_C=500mA$	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=500mA, I_B=50mA$			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=500mA, I_B=50mA$			1.2	V
Base-Emitter Saturation Voltage	V_{BE}	$V_{CE}=1V, I_C=10mA$			1.0	V
Current Gain Bandwidth Product	f_T	$V_{CE}=10V, I_C=50mA$	100			MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		9.0		pF

■ CLASSIFICATION OF h_{FE2}

RANK	C	D	E
RANGE	120-200	160-300	280-400

■ TYPICAL CHARACTERISTICS



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