



2SA1507

PNP SILICON TRANSISTOR

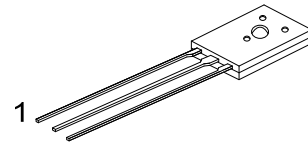
SWITCHING TRANSISTOR

■ APPLICATIONS

* Color TV audio output, converters, inverters

■ FEATURES

- * High breakdown voltage
- * Large current capacitance
- * High-speed switching



TO-126

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SA1507L-T60-K	2SA1507G-T60-K	TO-126	E	C	B	Bulk

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

2SA1507G-T60-K (1) Packing Type (2) Package Type (3) Green Package	(1) K: Bulk (2) T60: TO-126 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING

UTC	□□□□	→ Date Code
2SA1507	□	→ L: Lead Free
	□	→ G: Halogen Free

1

■ **ABSOLUTE MAXIMUM RATING** ($T_A=25^\circ\text{C}$, 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 Current	I_C	-1.5	A
Collector Current (Peak)	I_{CP}	-2.5	A
Collector Dissipation	P_C	1.5	W
Collector Dissipation ($T_C=25^\circ\text{C}$)		10	W
Junction Temperature	T_J	+150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +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)

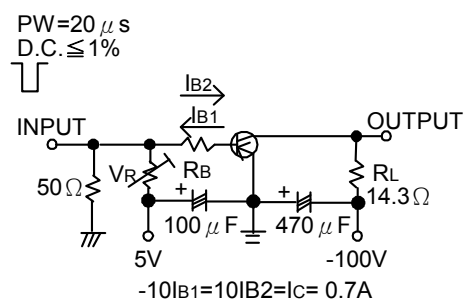
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}$, $I_E=0$	-180			V
Collector-to-Base Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}$, $R_{BE}=\infty$	-160			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C=0$, $I_E=-10\mu\text{A}$	-6			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-120\text{V}$, $I_E=0$			-0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-4\text{V}$, $I_C=0$			-0.1	μA
DC Current Gain	h_{FE1}	$V_{CE}=-5\text{V}$, $I_C=-100\text{mA}$	100		400	
	h_{FE2}	$V_{CE}=-5\text{V}$, $I_C=-10\text{mA}$	90			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}$, $I_B=-50\text{mA}$		-0.2	-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-500\text{mA}$, $I_B=-50\text{mA}$		-0.83	-1.2	V
Gain Bandwidth Product	f_T	$V_{CE}=-10\text{V}$, $I_C=-50\text{mA}$		120		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $f=1\text{MHz}$		22		pF
Turn-On Time	t_{on}	See specified Test Circuit		0.04		μs
Storage Time	T_{STG}	See specified Test Circuit		0.7		μs
Fall Time	t_f	See specified Test Circuit		0.04		μs

Note: Pulse test: Pulse width=300 μs , Duty Cycle $\leq 2\%$

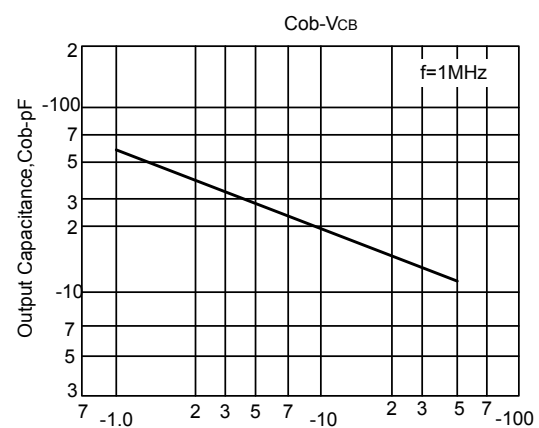
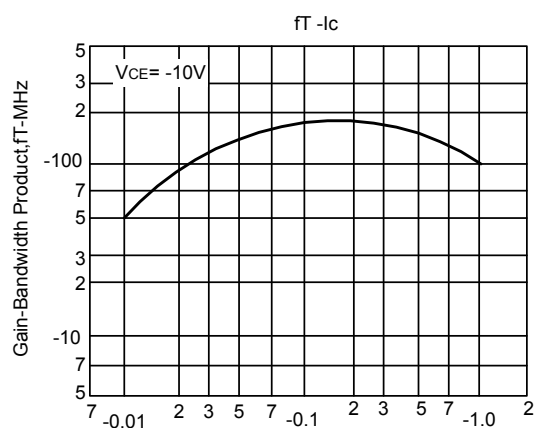
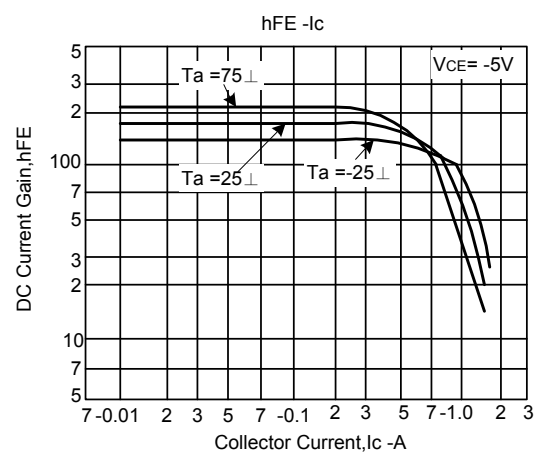
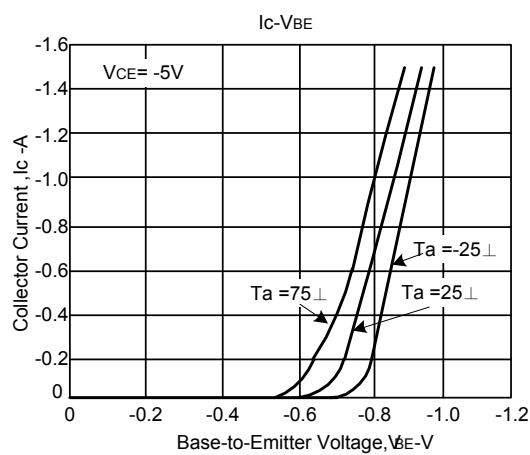
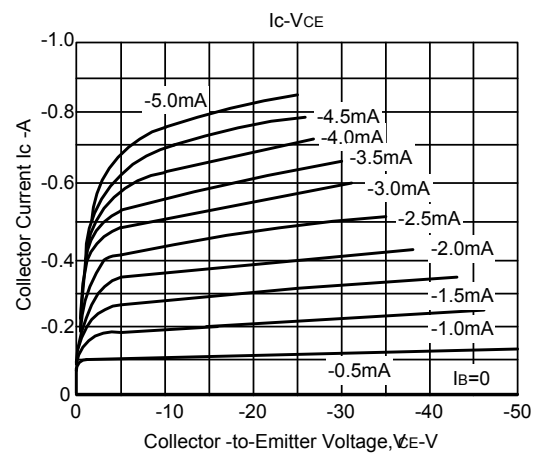
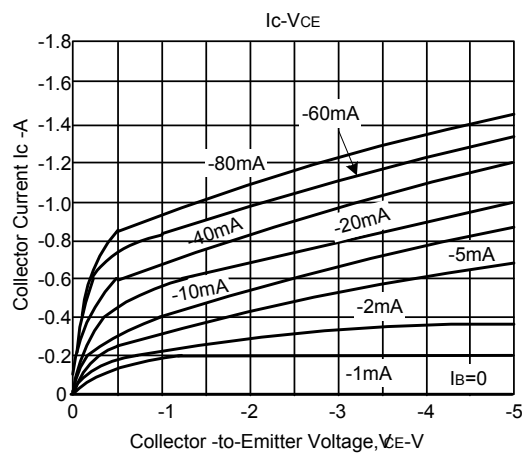
■ **CLASSIFICATION OF h_{FE}**

RANK	R	S	T
RANGE	100-200	140-280	200-400

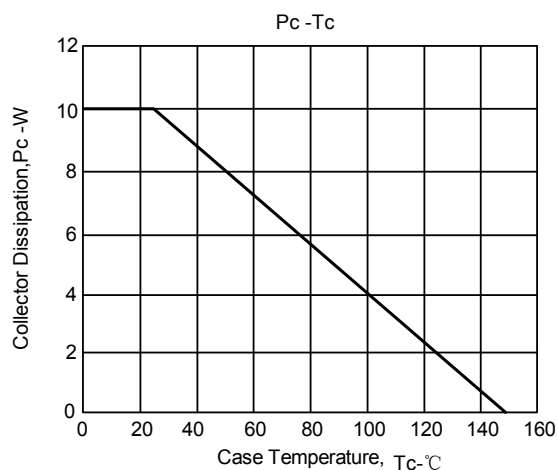
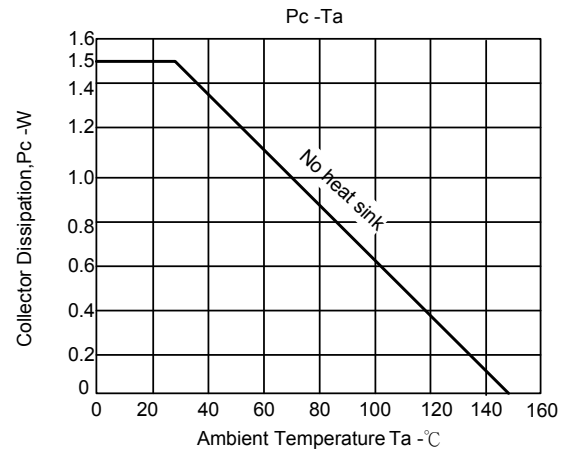
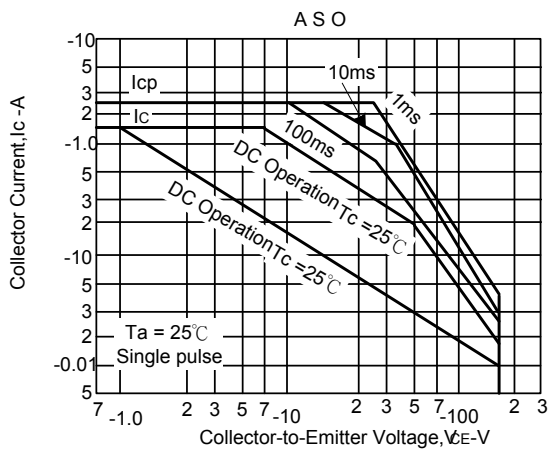
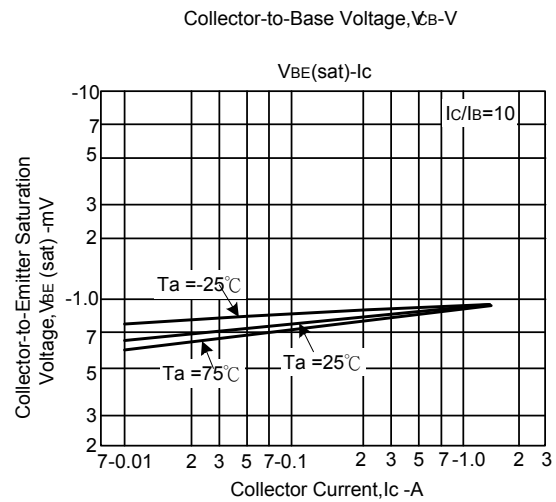
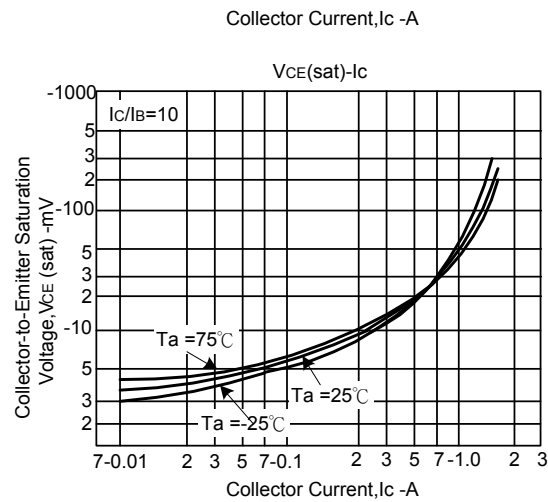
SWITCHING TIME TEST CIRCUIT



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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