

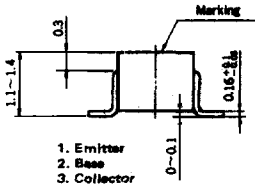
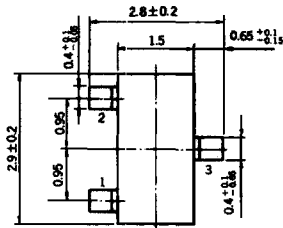
SILICON TRANSISTOR

2SA1462

HIGH SPEED SWITCHING PNP SILICON EPITAXIAL TRANSISTOR MINI MOLD

PACKAGE DIMENSIONS

in millimeters



FEATURES

- High Speed Switching : $t_{on} = 9.0 \text{ ns TYP.}$
 $t_{off} = 19.0 \text{ ns TYP.}$
- High f_T : $f_T = 1800 \text{ MHz TYP.}$
- Low C_{ob} : $C_{ob} = 2.0 \text{ pF TYP.}$
- Complementary to 2SC3735

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ($T_a = 25^\circ\text{C}$)

Collector to Base Voltage	V_{CBO}	-15	V
Collector to Emitter Voltage	V_{CEO}	-15	V
Emitter to Base Voltage	V_{EBO}	-4.5	V
Collector Current (DC)	I_C	-50	mA

Maximum Power Dissipation

Total power Dissipation at 25°C Ambient Temperature	P_T	200	mW
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Maximum Temperatures

Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

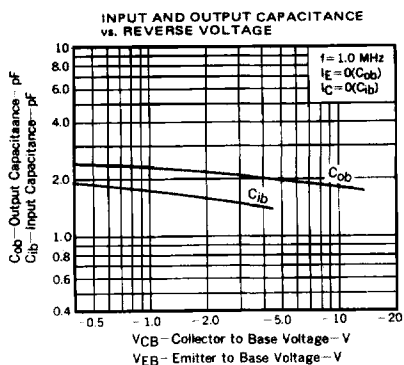
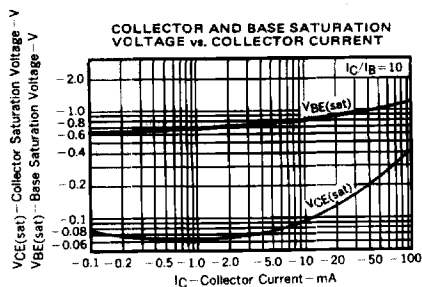
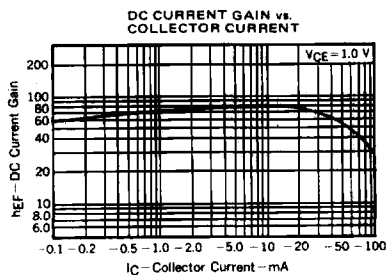
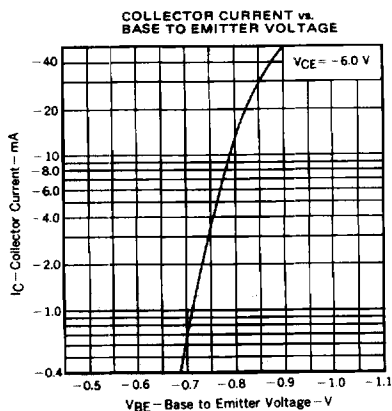
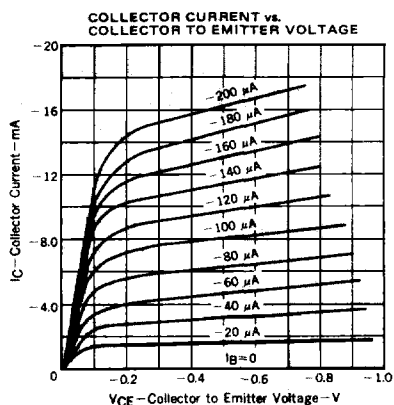
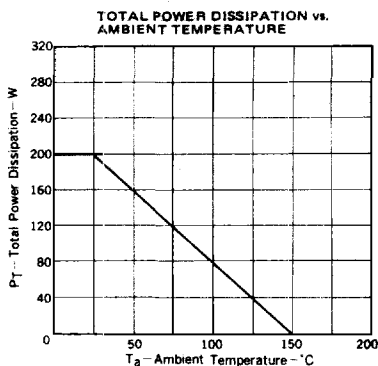
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

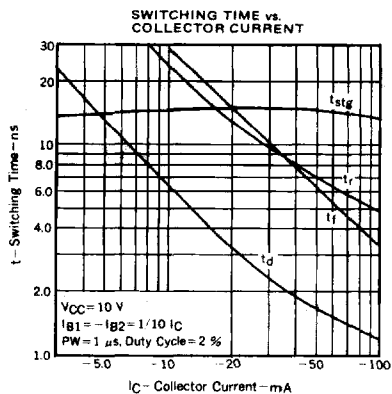
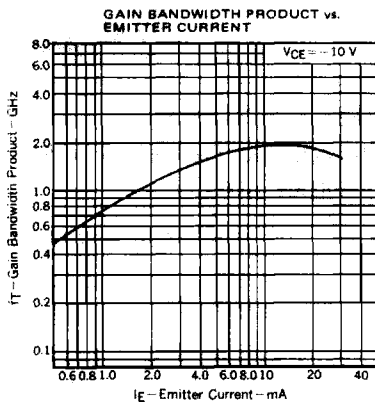
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			-100	nA	$V_{CB} = -8.0 \text{ V}, I_E = 0$
Emitter Cutoff Current	I_{EBO}			-100	nA	$V_{EB} = -3.0 \text{ V}, I_C = 0$
DC Current Gain	h_{FE1}^*	30	70			$V_{CE} = -1.0 \text{ V}, I_C = -1.0 \text{ mA}$
DC Current Gain	h_{FE2}^*	50	80	150		$V_{CE} = -1.0 \text{ V}, I_C = -10 \text{ mA}$
Collector Saturation Voltage	$V_{CE(sat)}^*$		-0.09	-0.20	V	$I_C = -10 \text{ mA}, I_B = -1.0 \text{ mA}$
Base Saturation Voltage	$V_{BE(sat)}^*$		-0.80	-0.95	V	$I_C = -10 \text{ mA}, I_B = -1.0 \text{ mA}$
Gain Bandwidth Product	f_T	800	1800		MHz	$V_{CE} = -10 \text{ V}, I_E = 10 \text{ mA}$
Output Capacitance	C_{ob}		2.0	3.0	pF	$V_{CB} = -5.0 \text{ V}, I_E = 0, f = 1.0 \text{ MHz}$
Turn-on Time	t_{on}		9.0	20	ns	$I_C = -10 \text{ mA}$ $I_{B1} = -I_{B2} = -1.0 \text{ mA}$
Storage Time	t_{stg}		18	40	ns	
Turn-off Time	t_{off}		19	40	ns	

* Pulsed: $PW \leq 350 \mu\text{s}$, Duty Cycle $\leq 2\%$

h_{FE2} Classification

Making	Y33	Y34
h_{FE2}	50 to 100	75 to 150

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



SWITCHING TIME TEST CIRCUIT

