



PNP Silicon Epitaxial Transistor

2SA1464

FEATURES

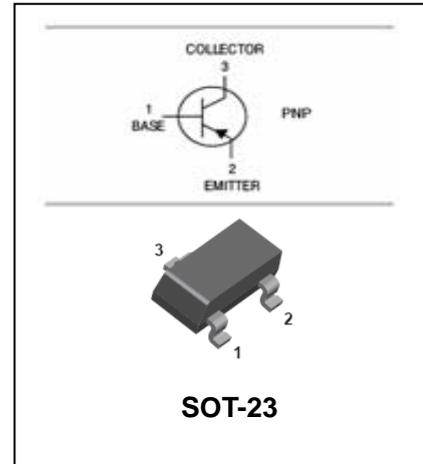
- High f_T : $f_T=400\text{MHz}$
- Complementary to 2SC3739.



Lead-free

APPLICATIONS

- For power application and switching.



ORDERING INFORMATION

Type No.	Marking	Package Code
2SA1464	Y12/Y13/Y14	SOT-23

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-500	mA
P_C	Total Power Dissipation	200	mW
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector cut-off current	I_{CBO}	$V_{CB}=-40V, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4.0V, I_C=0$			-0.1	μA
DC current gain	h_{FE1}	$V_{CE}=-2.0V, I_C=-150mA$	75	140	300	
DC current gain	h_{FE2}	$V_{CE}=-2.0V, I_C=-500mA$	20	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500mA, I_B=-50mA$		-0.45	-0.75	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500mA, I_B=-50mA$		-1.0	-1.30	V
Transition frequency	f_T	$V_{CE}=-10V, I_E=20mA$	150	400		MHz
output capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$		5.0	8.0	pF
Turn-on Time	t_{on}	$V_{cc}=-30V$			35	ns
Storage Time	t_{stg}	$I_C=150mA$			225	ns
Turn-off Time	t_{off}	$I_{B1}=-I_{B2}=15mA$			255	ns

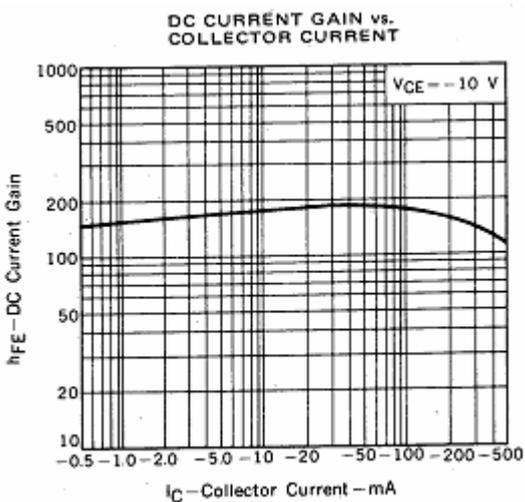
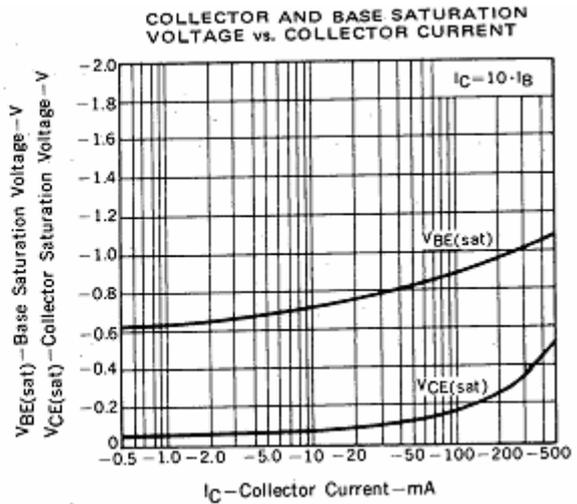
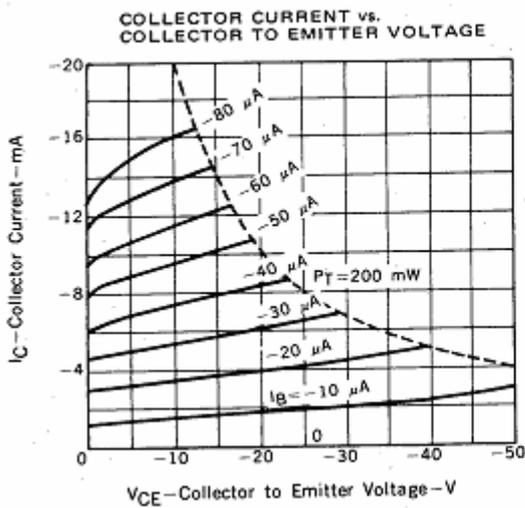
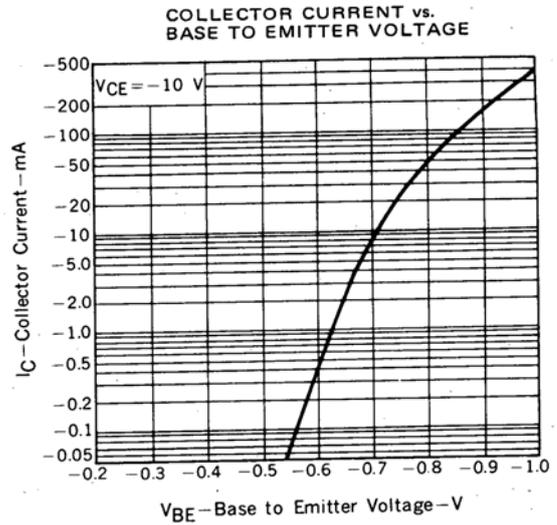
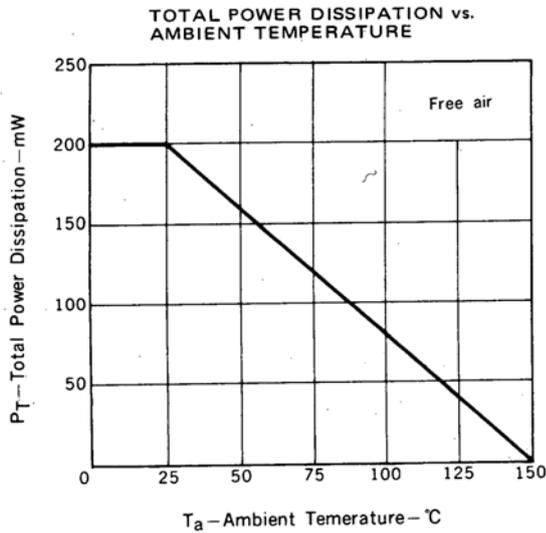
Marking	Y12	Y13	Y14
h_{FE1}	75-150	100-200	150-300



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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

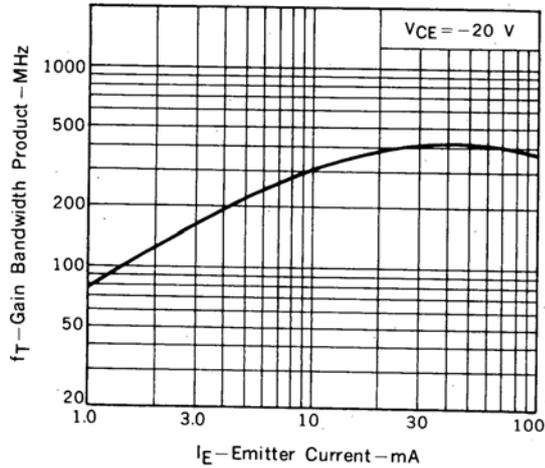




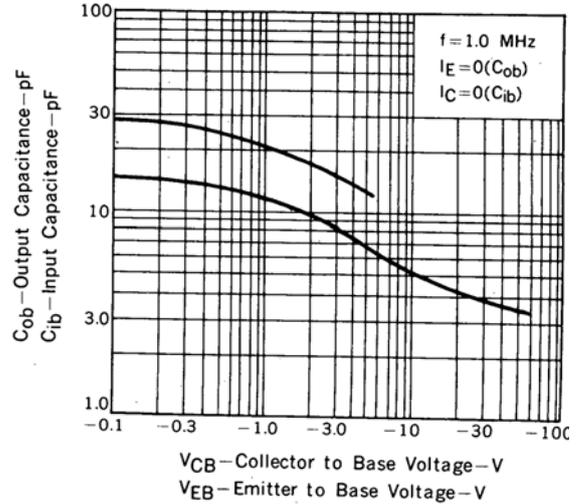
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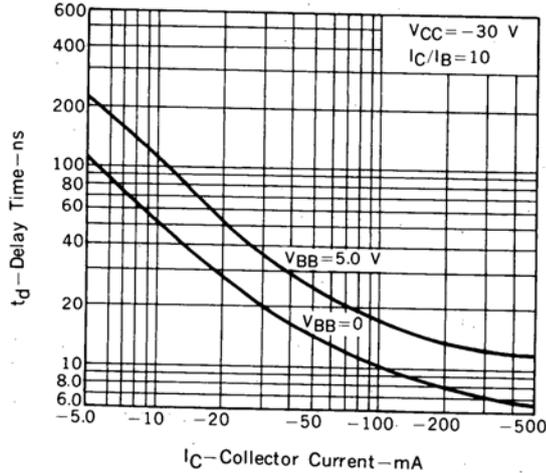
GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



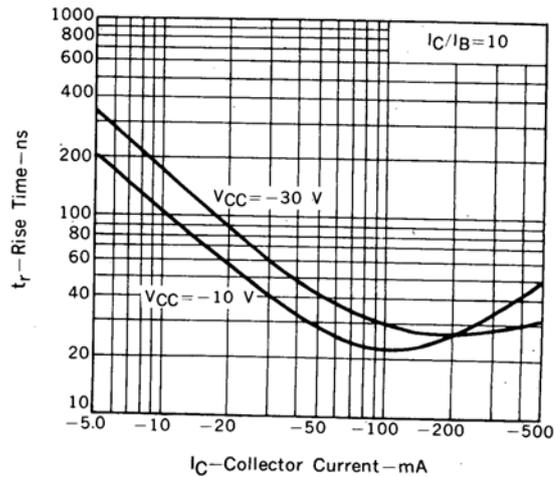
INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



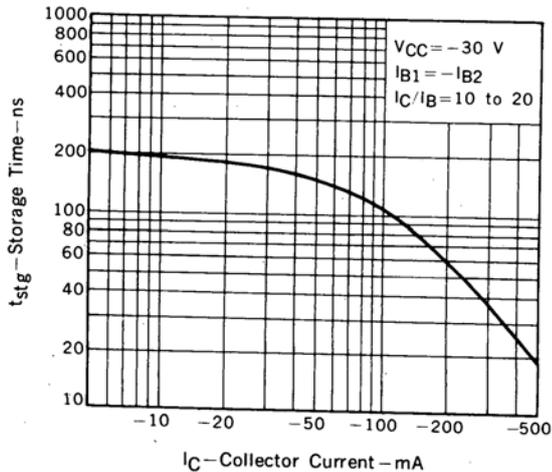
DELAY TIME vs. COLLECTOR CURRENT



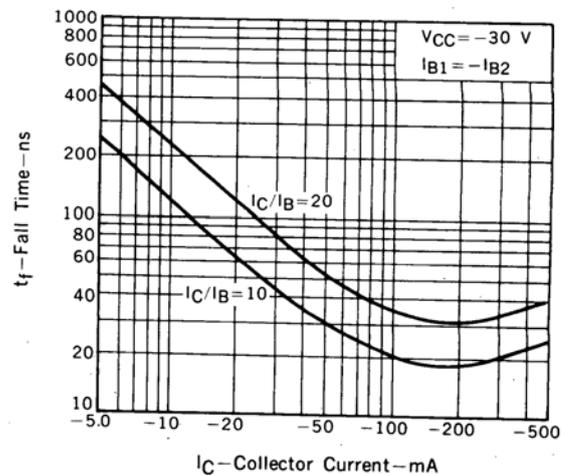
RISE TIME vs. COLLECTOR CURRENT



STORAGE TIME vs. COLLECTOR CURRENT



FALL TIME vs. COLLECTOR CURRENT



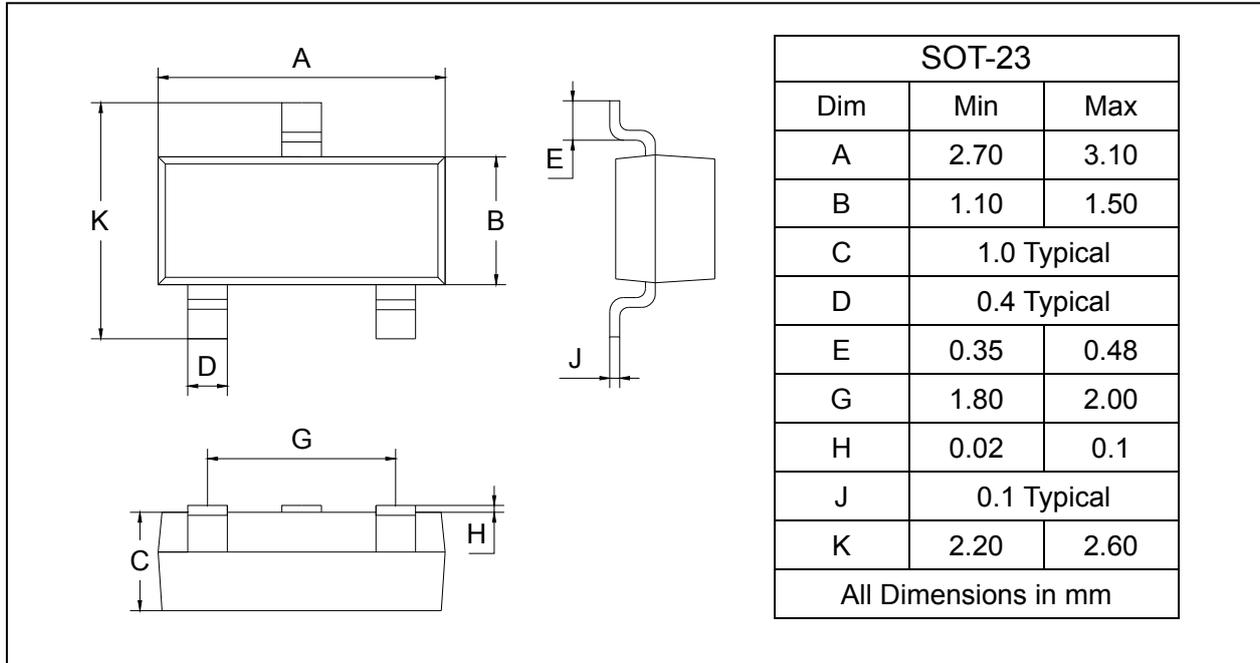
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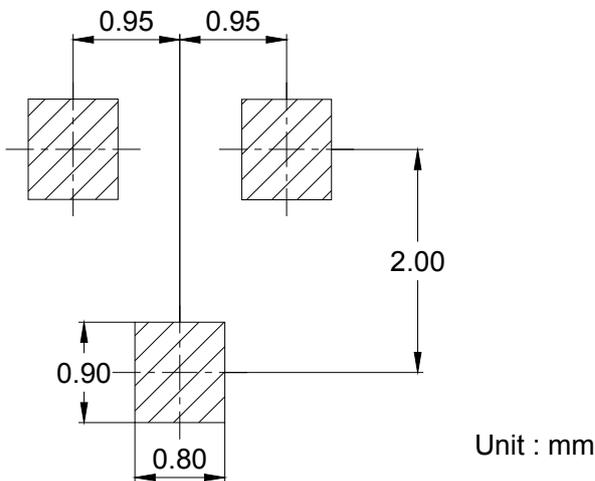
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SA1464	SOT-23	3000/Tape&Reel