



Micro Commercial Components



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**2SA1464-P
2SA1464-Q
2SA1464-R**

Features

- High f_T : $f_T=400\text{MHZ}$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings @ $T_a = 25^\circ\text{C}$ (unless otherwise noted)

Symbol	Parameter	Value	Unit
I_C	Collector Current	-0.5	A
P_D	Collector Power Dissipation	0.2	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	TYPE	Max	Units
OFF CHARACTERISTICS					
V_{CEO}	Collector-Emitter Breakdown Voltage	-40			V
V_{CBO}	Collector-Base Breakdown Voltage	-60			V
V_{EBO}	Collector-Base Breakdown Voltage	-5.0			V
I_{CBO}	Collector-Base Cutoff Current ($V_{CB}=-40\text{Vdc}$, $I_E=0$)			- 100	nAdc
I_{EBO}	Emitter-Base Cutoff Current ($V_{EB}=-4.0\text{Vdc}$, $I_C=0$)			- 100	nAdc

ON CHARACTERISTICS

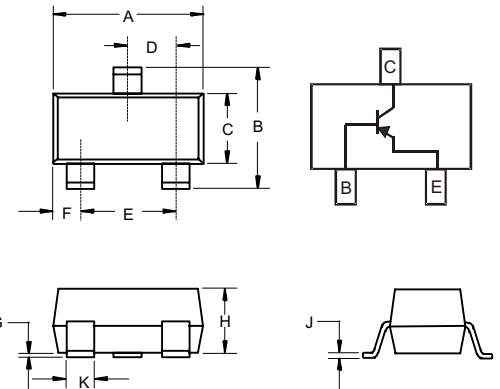
H_{FE}	DC Current Gain ($I_C=-150\text{mAdc}$, $V_{CE}=-2.0\text{Vdc}$) ($I_C=-500\text{mAdc}$, $V_{CE}=-2.0\text{Vdc}$)	75 20	140 50	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage * ($I_C=-500\text{mAdc}$, $I_B=-50\text{mAdc}$)		-0.45	-0.75	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage * ($I_C=-500\text{mAdc}$, $I_B=-50\text{mAdc}$)		-1	-1.3	Vdc
F_T	Gain bandwidth product ($V_{CE}=-10\text{Vdc}$, $I_E=20\text{mAdc}$)	150	400		MHZ
C_{ob}	($V_{CB}=-10\text{Vdc}$, $I_E=0$, $f=1\text{MHZ}$)		5	8	pF
T_{on}	Turn-on time	$V_{CC}=-30\text{V}$,		35	ns
T_{stg}	Storage time	$I_C=150\text{mA}$,		225	ns
T_{off}	Turn-off time	$I_{B1}=-I_{B2}=15\text{mA}$		255	ns

CLASSIFICATION OF h_{FE}

Rank	P	Q	R
Range	75-150	100-200	150-300
Marking	Y12	Y13	Y14

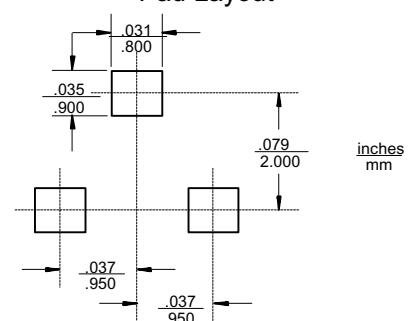
**PNP Silicon
Epitaxial Transistors**

SOT-23

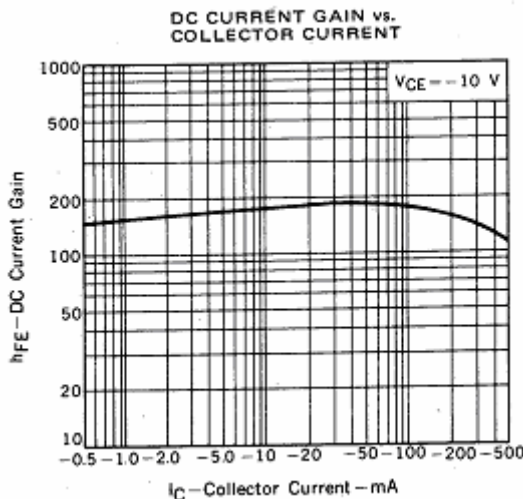
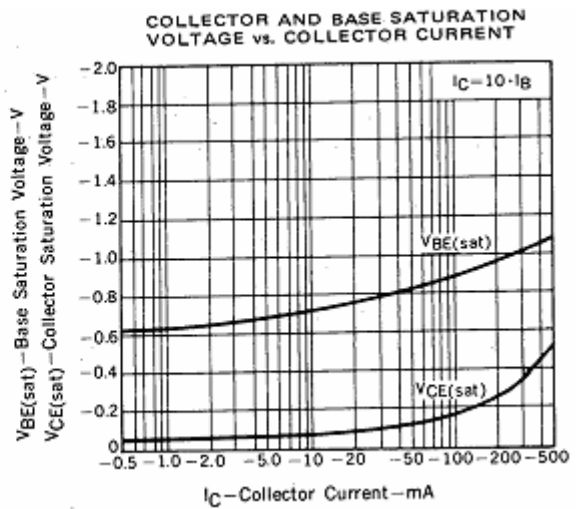
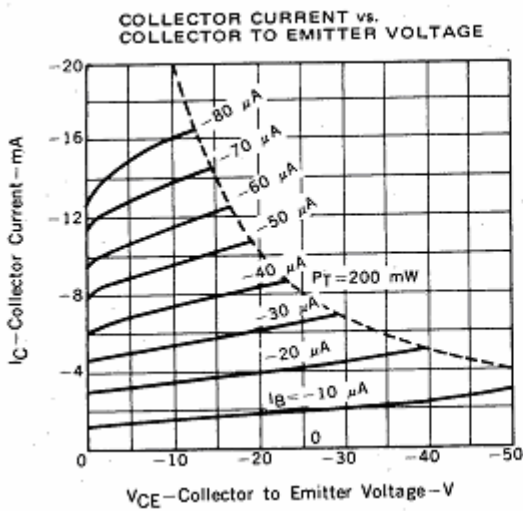
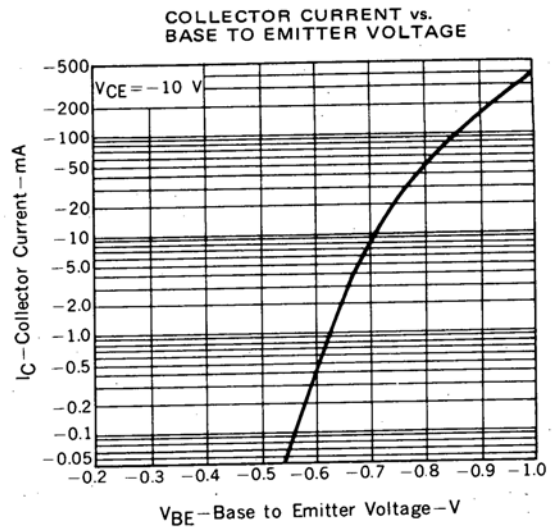
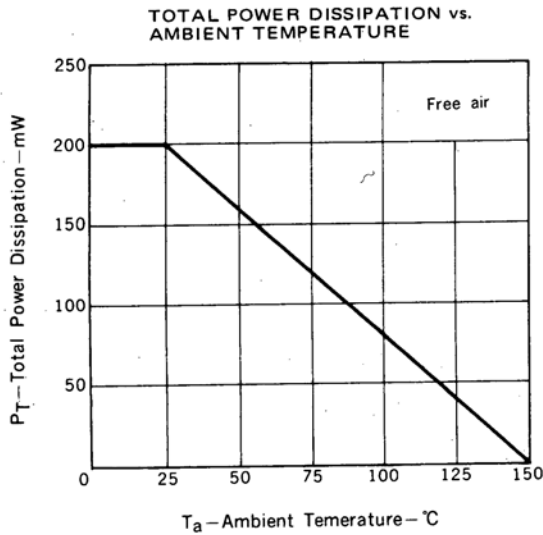


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

**Suggested Solder
Pad Layout**

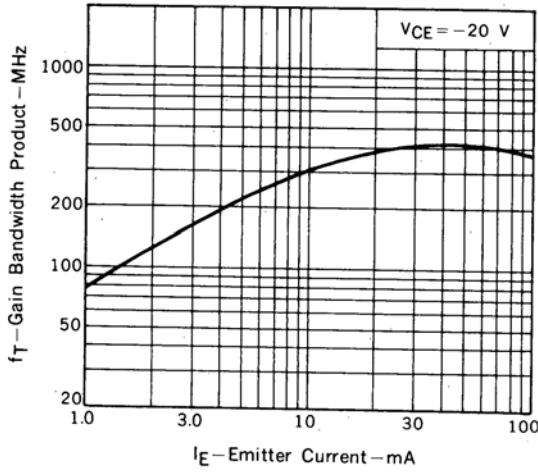


2SA1464 Typical Characteristics

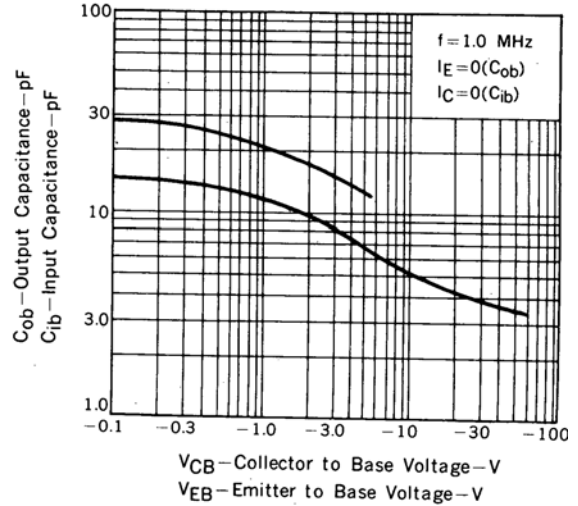


2SA1464 Typical Characteristics

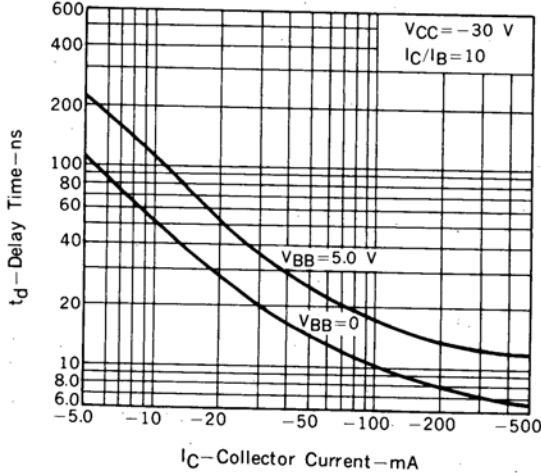
GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



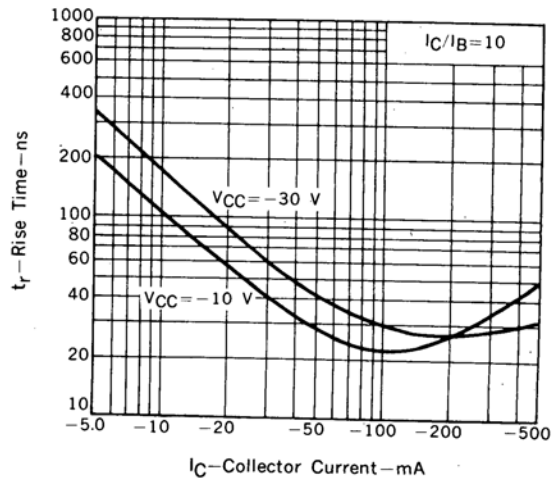
INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



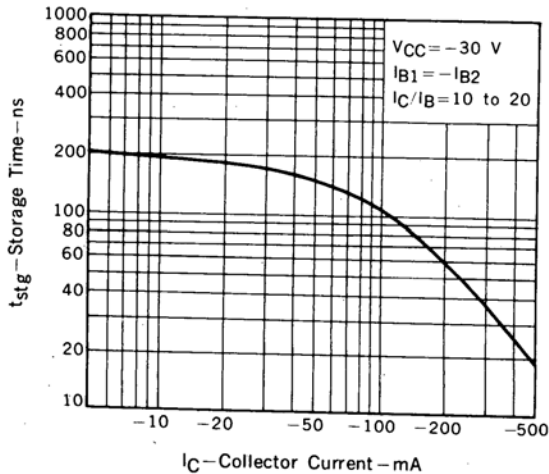
DELAY TIME vs. COLLECTOR CURRENT



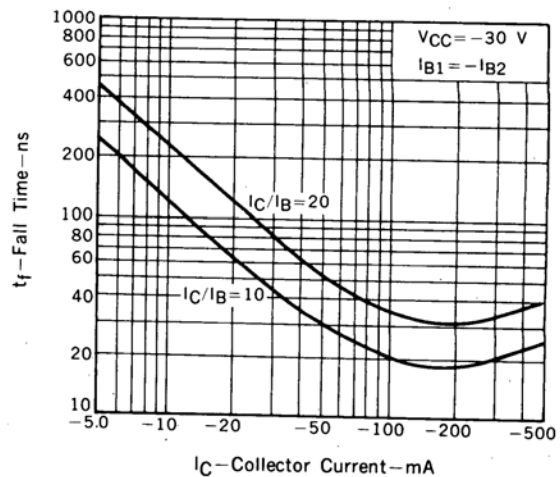
RISE TIME vs. COLLECTOR CURRENT



STORAGE TIME vs. COLLECTOR CURRENT



FALL TIME vs. COLLECTOR CURRENT





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Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 3 Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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