

**M·C·C·**

Micro Commercial Components



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 @  $25^\circ\text{C}$  Unless Otherwise Specified

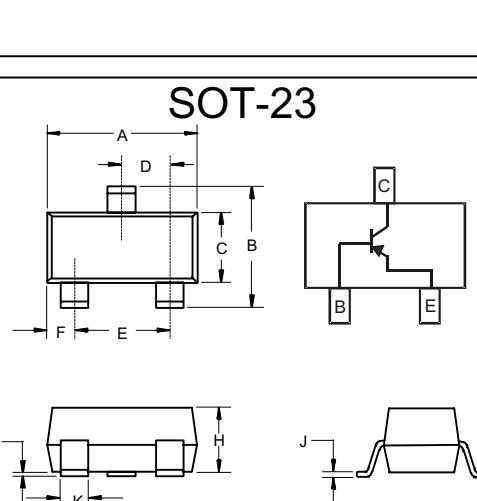
Symbol	Parameter	Min	Type	Max	Units
<b>OFF CHARACTERISTICS</b>					
$V_{CEO}$	Collector-Emitter Breakdown Voltage	-40			V
$V_{CBO}$	Collector-Base Breakdown Voltage	-60			V
$V_{EBO}$	Collector-Base Breakdown Voltage	-5.0			V
$I_{CBO}$	Collector-Base Cutoff Current ( $V_{CB}=-40\text{Vdc}, I_E=0$ )			- 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 ( $I_C=150\text{mA}, V_{CE}=-2.0\text{Vdc}$ ) ( $I_C=500\text{mA}, V_{CE}=-2.0\text{Vdc}$ )	75 20	140 50	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage *		-0.45	-0.75	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage *		-1	-1.3	Vdc
$F_T$	Gain bandwidth product ( $V_{CE}=-10\text{Vdc}, I_E=20\text{mA}$ )	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

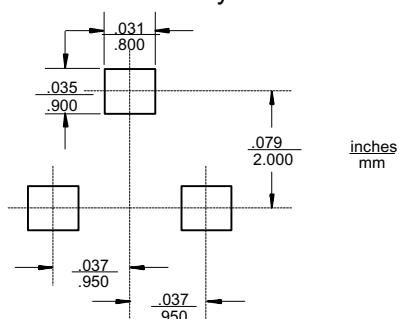
### CLASSIFICATION OF $h_{FE}$

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



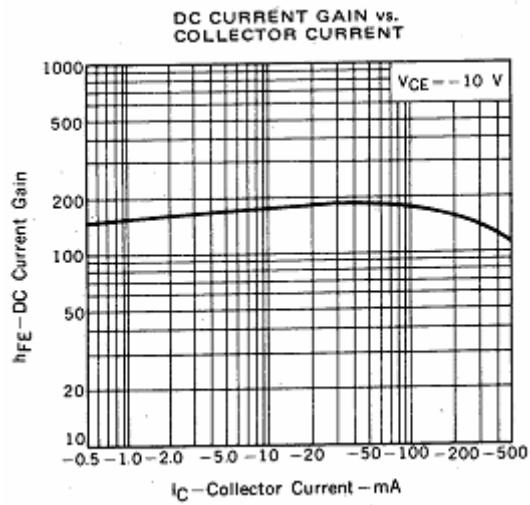
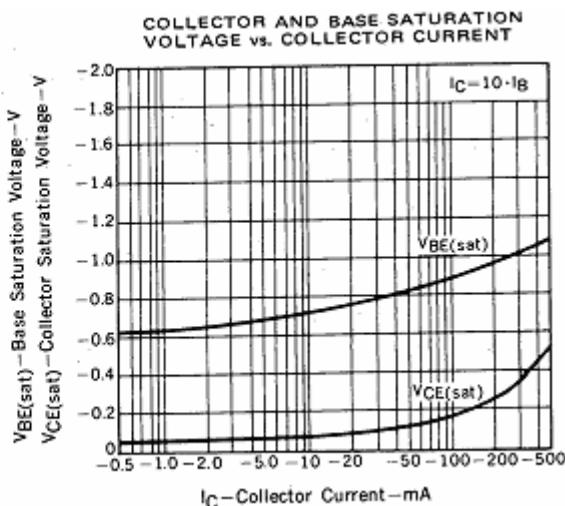
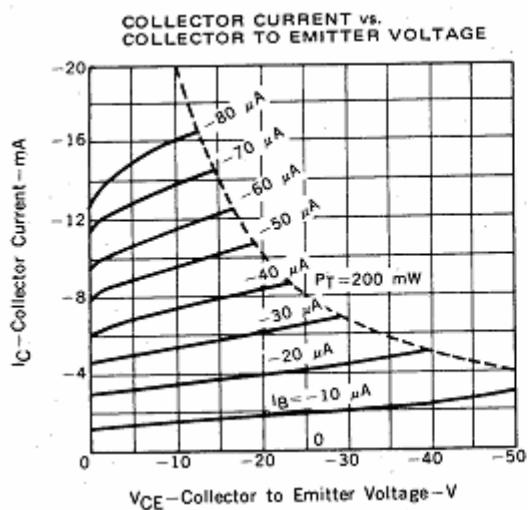
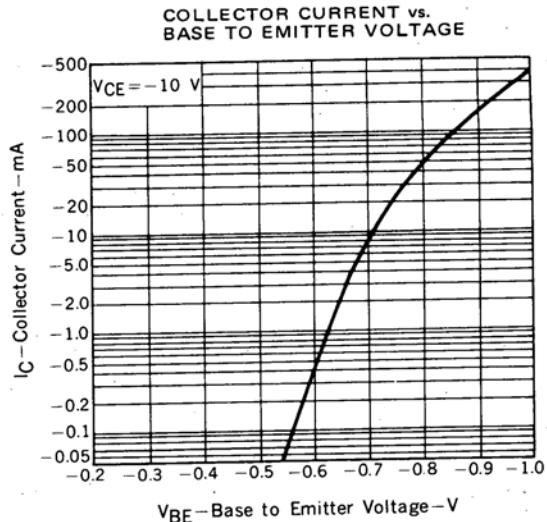
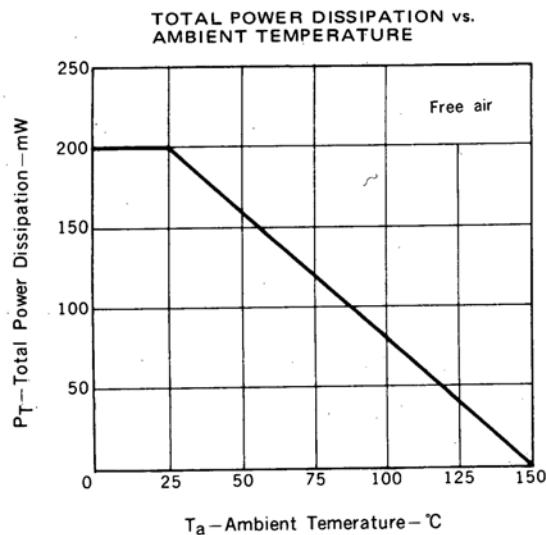
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout

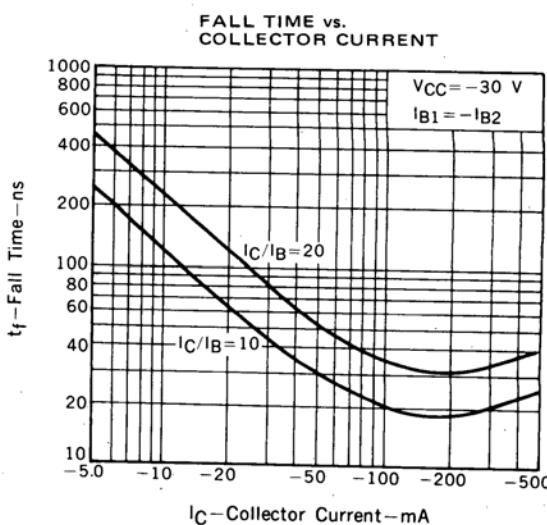
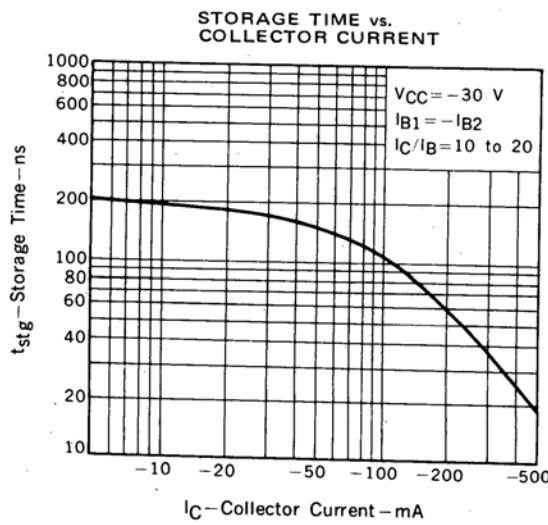
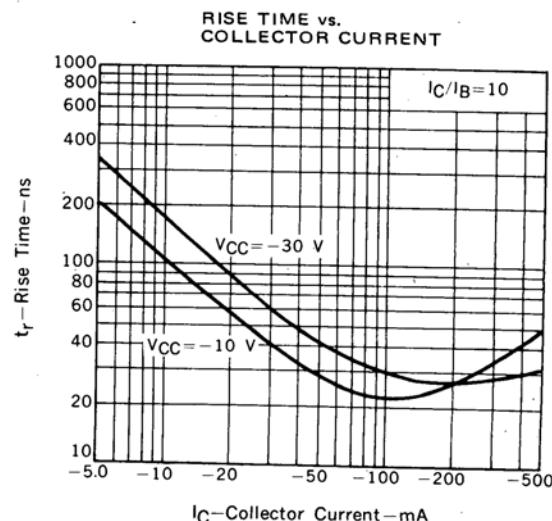
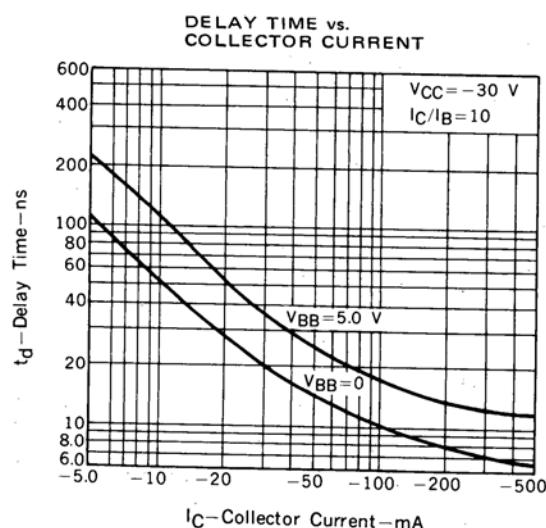
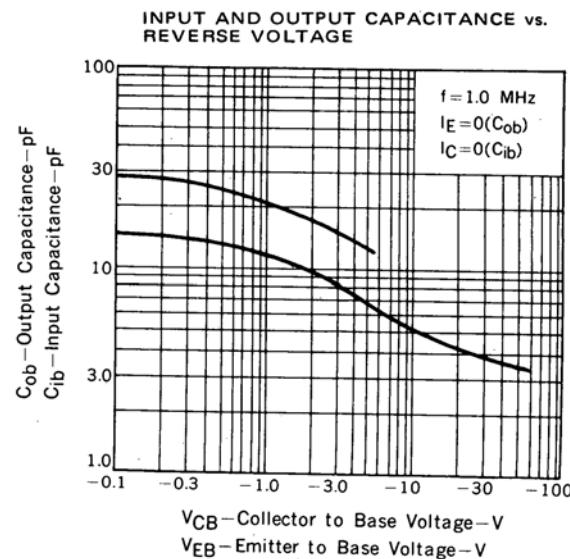
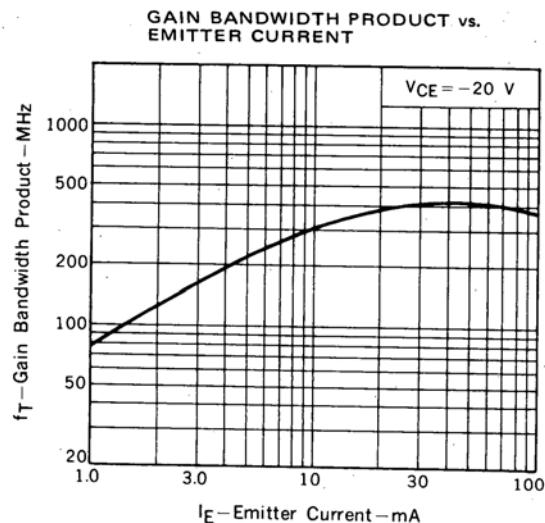


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## 2SA1464 Typical Characteristics



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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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