



No.3160A

2SC4504

NPN Epitaxial Planar Silicon Transistor
High-Definition CRT Display
Video Output Driver Applications

Features

- High f_T ($f_T=2.2\text{GHz}$ typ).
- Large current ($I_C=300\text{mA}$).
- Adoption of FBET process.

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

			unit
Collector-to-Base Voltage	V_{CB0}	30	V
Collector-to-Emitter Voltage	V_{CEO}	20	V
Emitter-to-Base Voltage	V_{EBO}	3	V
Collector Current	I_C	300	mA
Collector Current (Pulse)	I_{CP}	600	mA
Collector Dissipation	P_C	0.5	W
	P_C	1.3	W
		Mounted on ceramic board ($250\text{mm}^2 \times 0.8\text{mm}$)	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

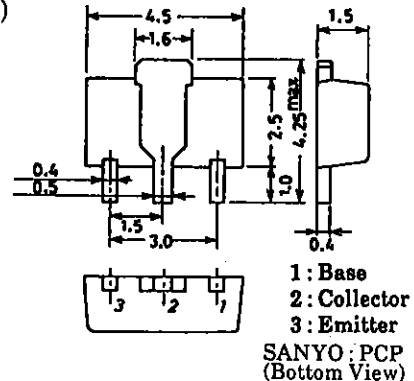
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=2\text{V}, I_C=0$			5.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=50\text{mA}$	40*		200*	
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=300\text{mA}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=5\text{V}, I_C=50\text{mA}$		2.2		GHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		2.9		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=10\text{V}, f=1\text{MHz}$		2.6		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$	0.15	0.5		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$	0.9	1.2		V

* : The 2SC4504 is classified by 50mA h_{FE} as follows :

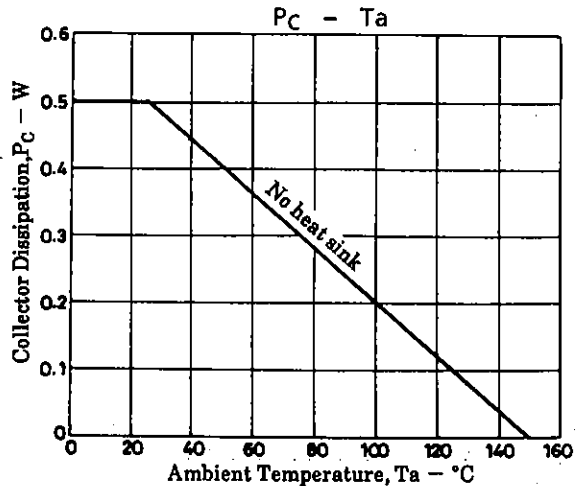
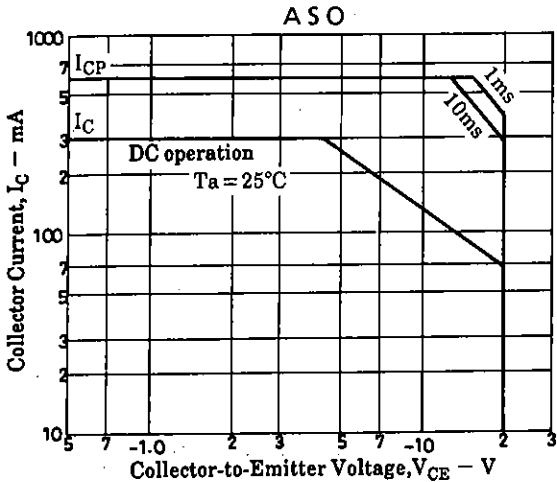
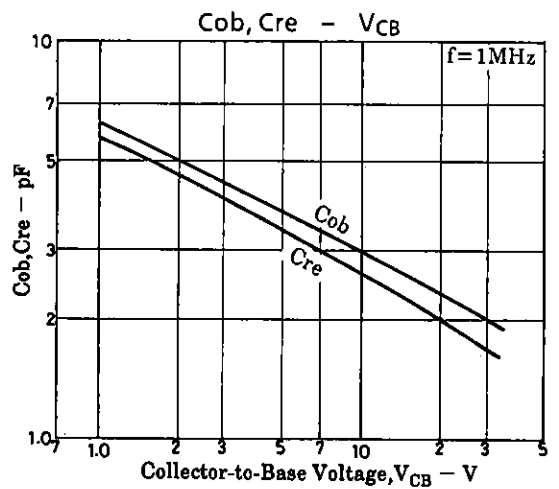
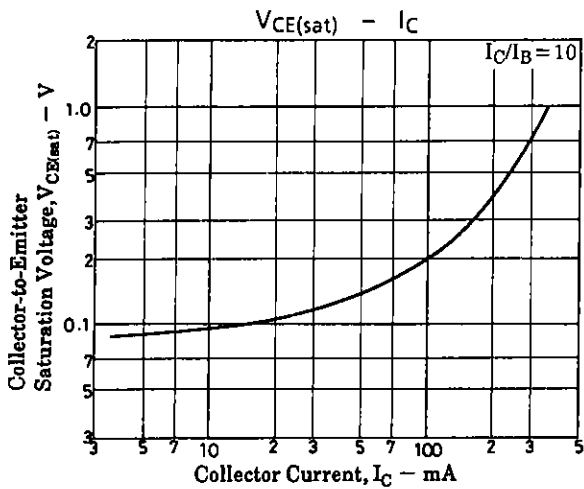
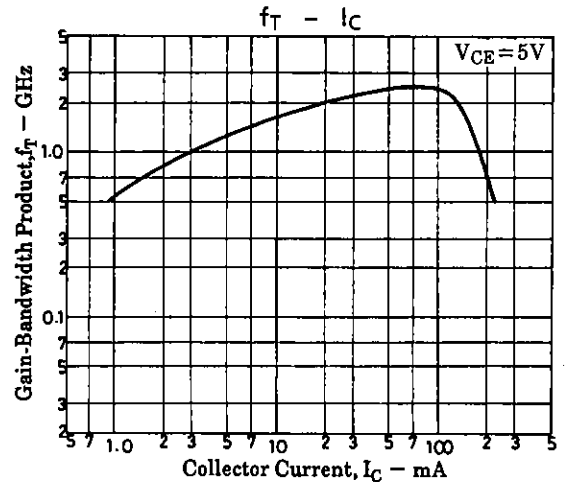
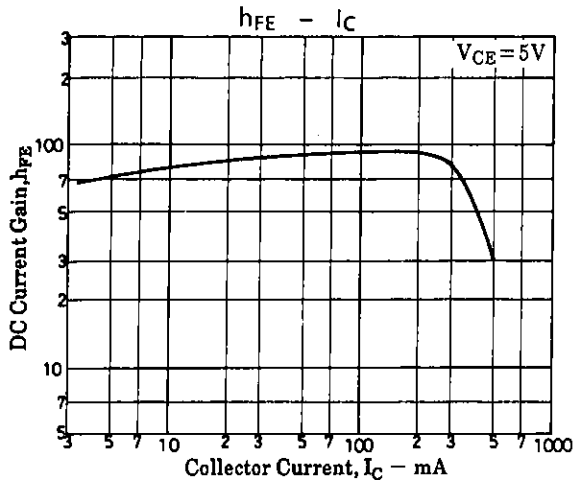
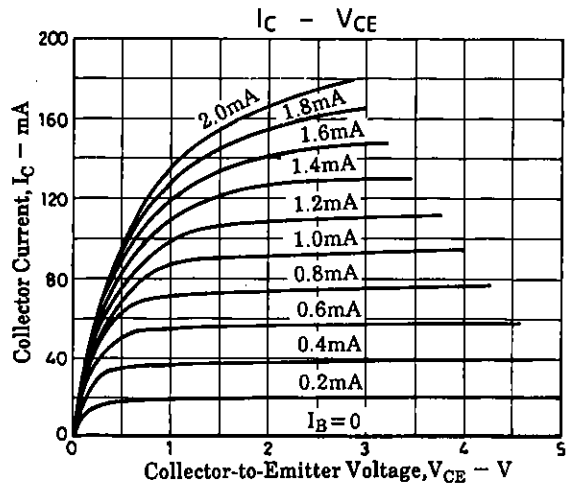
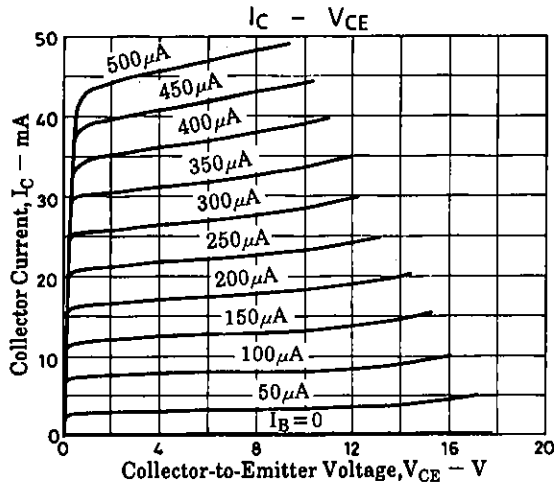
40	C	80	60	D	120	100	E	200
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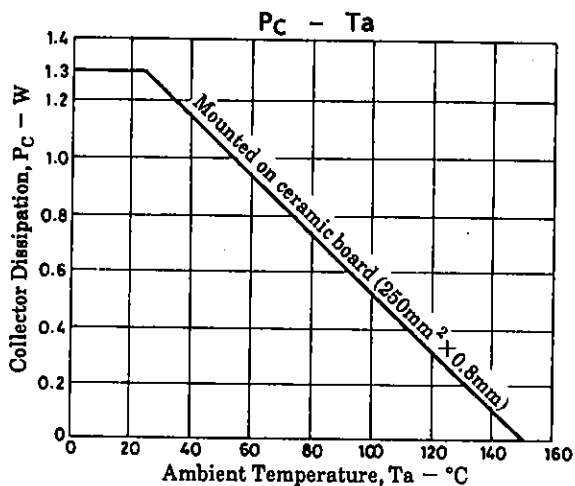
Marking : CM
 h_{FE} rank : C, D, E

Package Dimensions 2038A
 (unit : mm)



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