

<b>SANYO</b>	No.1438B	<b>2SC3504</b>
		NPN Epitaxial Planar Silicon Transistor High-Definition CRT Display, Video Output Applications

**Features**

- . High  $f_T$ .
- . Small reverse transfer capacitance.

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

Collector to Base Voltage	$V_{CB0}$	70	V	unit
Collector to Emitter Voltage	$V_{CEO}$	60	V	
Emitter to Base Voltage	$V_{EBO}$	4	V	
Collector Current	$I_C$	50	mA	
Collector Current(Pulse)	$I_{CP}$	100	mA	
Collector Dissipation	$P_C$	900	mW	
Junction Temperature	$T_J$	150	$^\circ\text{C}$	
Storage Temperature	$T_{stg}$	-55 to +150		$^\circ\text{C}$

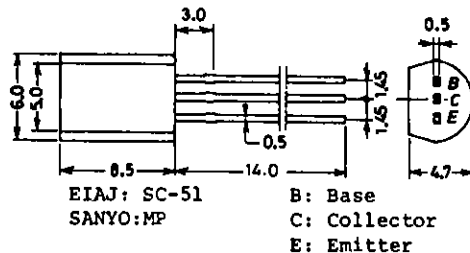
**Electrical Characteristics at  $T_a=25^\circ\text{C}$**

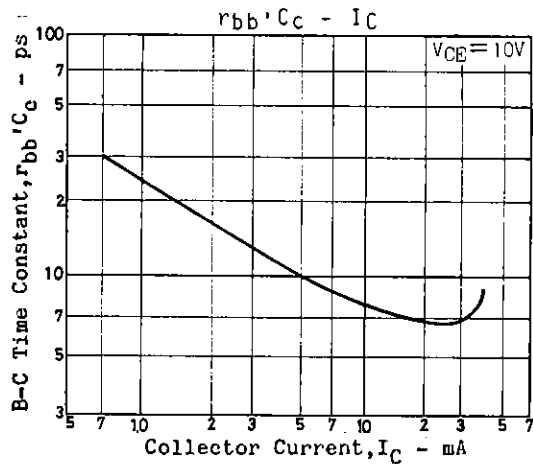
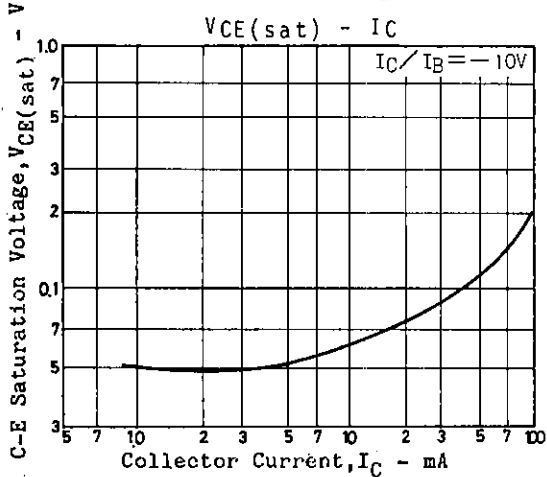
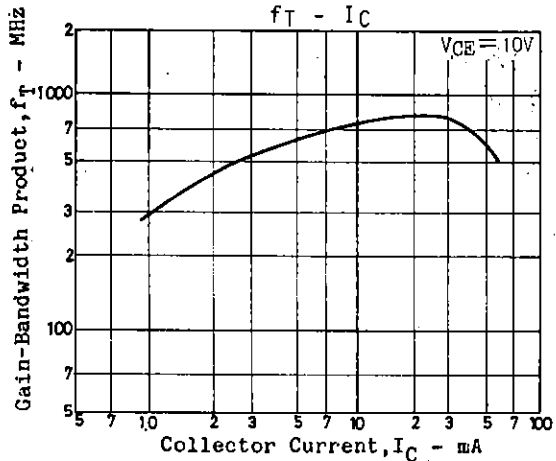
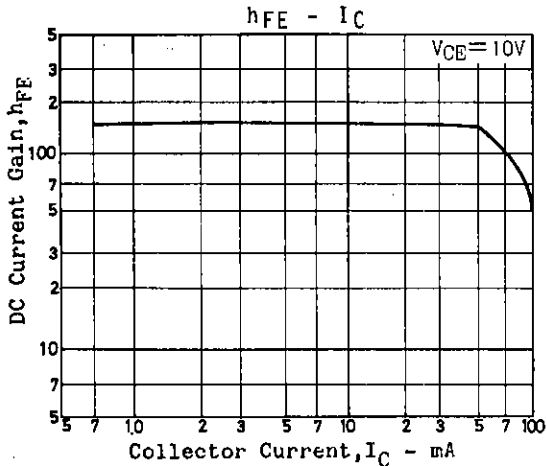
			min	typ	max	unit
Collector Cutoff Current	$I_{CB0}$	$V_{CB}=40\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=3\text{V}, I_C=0$			1.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	60*		320*	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	300	500		MHz
Base to Collector Time Constant	$r_{bb}'c_c$	$V_{CE}=10\text{V}, I_C=10\text{mA}$		8	20	ps
Reverse Transfer Capacitance	$c_{re}$	$V_{CB}=10\text{V}, f=1\text{MHz}$		1.0	1.6	pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20\text{mA}, I_B=2\text{mA}$			0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=20\text{mA}, I_B=2\text{mA}$			1.0	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	70			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	60			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	4			V

\* The 2SC3504 is classified by 10mA  $h_{FE}$  as follows:

60	D	120	100	E	200	160	F	320
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**Package Dimensions 2006A**  
(unit: mm)





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