

SANYO

No.1765A

2SA1406/2SC3600

PNP/NPN Epitaxial Planar Silicon Transistor

Ultrahigh-Definition CRT Display
Video Output Applications

Applications

- Ultrahigh-definition CRT display.
- Video output.
- Color TV chroma output.
- Wide-band amp.

Features

- High f_T . f_T typ=400MHz.
- High breakdown voltage. $V_{CE0} \geq 200V$
- Small reverse transfer capacitance and excellent HF response
cre=1.4pF(NPN), 1.7pF(PNP).
- Complementary PNP and NPN types.
- Adoption of FBET process.

(): 2SA1406

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

			unit
Collector-to-Base Voltage	V_{CB0}	(-)200	V
Collector-to-Emitter Voltage	V_{CE0}	(-)200	V
Emitter-to-Base Voltage	V_{EB0}	(-)4	V
Collector Current	I_C	(-)100	mA
Collector Current (Pulse)	I_{CP}	(-)200	mA
Collector Dissipation	P_C	1.2	W
	$T_c=25^\circ C$	7	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

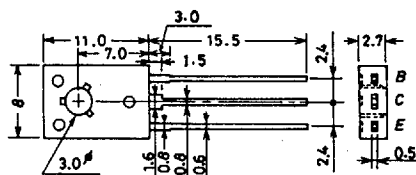
Electrical Characteristics at $T_a=25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=(-)150V, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB}=(-)2V, I_C=0$			(-)1.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=(-)10V, I_C=(-)10mA$	40*		320*	
	$h_{FE}(2)$	$V_{CE}=(-)10V, I_C=(-)60mA$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)30mA$		400		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			0.6	V
					(-0.8)	V

Continued on next page.

*: The 2SA1406/2SC3600 are classified by 10mA h_{FE} as follows:

40	C	80	60	D	120
100	E	200	160	F	320

Package Dimensions 2009A
(unit: mm)


JEDEC: TO-126

B: Base
C: Collector
E: Emitter

SANYO Electric Co., Ltd. Semiconductor Business Headquarters

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

2SA1406/2SC3600

Continued from preceding page.

		min	typ	max	unit
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$		(-) 1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$		(-) 200	V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$		(-) 200	V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)100\mu A, I_C=0$		(-) 4	V
Output Capacitance	C_{ob}	$V_{CB}=(-)30V, f=1MHz$	1.8		pF
			(2.3)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30V, f=1MHz$	1.4		pF
			(1.7)		pF

