Ordering number: EN 2253A

SANYO

No.2253A

2SA1478/2SC3788

PNP/NPN Epitaxial Planar Silicon Transistor

High-Definition CRT Display Video Output Applications

Features

- High breakdown voltage : $V_{CEO} \geqq 200V$
- Small reverse transfer capacitance and excellent high frequency characteristic : Cre=1.2pF(NPN), 1.7pF(PNP)
- Adoption of FBET process

( ): 2SA1478

Absolute Maximum Ratings at Ta=25°C

				unit
Collector-to-Base Voltage	V_{CBO}		(-)200	V
Collector-to-Emitter Voltage	V_{CEO}		(-)200	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)100	mA
Collector Current (Pulse)	I_{CP}		(-)200	mA
Collector Dissipation	P_C		1.3	W
		Tc=25°C	5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

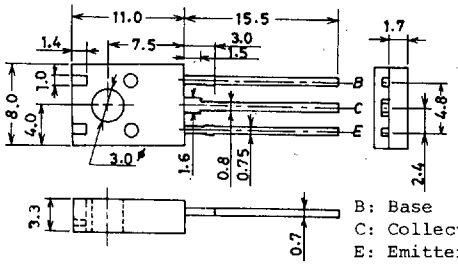
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)150V, I_E=0			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)4V, I_C=0			(-)0.1	μA
DC Current Gain	h_{FE}	V_{CE}=(-)10V, I_C=(-)10mA	40*		320*	
Gain-Bandwidth Product	f_T	V_{CE}=(-)30V, I_C=(-)10mA		150		MHz
Output Capacitance	Cob	V_{CB}=(-)30V, f=1MHz		1.7 (2.6)		pF
Reverse Transfer Capacitance	Cre	V_{CB}=(-)30V, f=1MHz		1.2 (1.7)		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(-)20mA, I_B=(-)2mA			(-)0.6	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=(-)20mA, I_B=(-)2mA			(-)1.0	V

Continued on next page.

*: The 2SA1478/2SC3788 are classified by 10mA h_{FE} as follows:

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

Package Dimensions 2042A
(unit: mm)



B: Base
C: Collector
E: Emitter

SANYO: TO126ML

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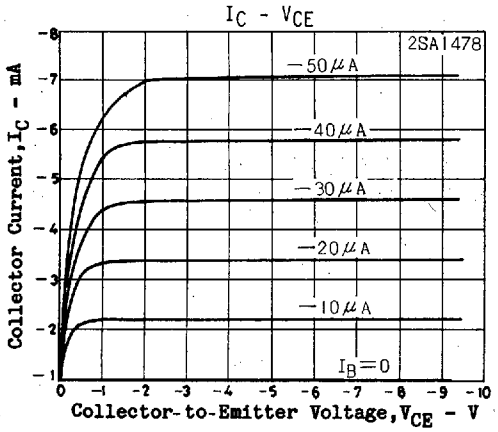
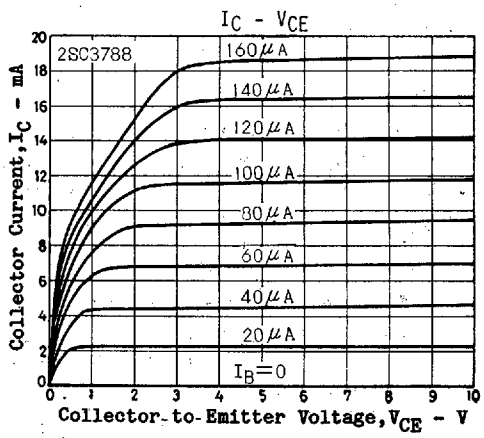
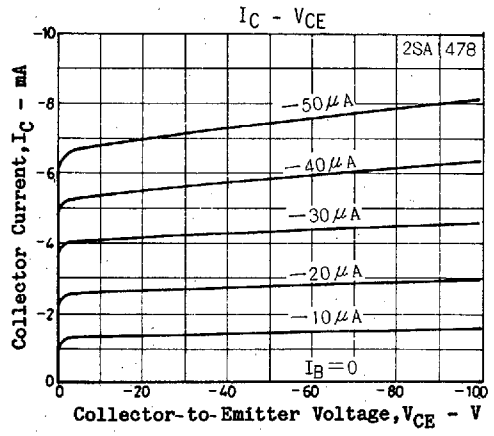
TOKYO OFFICE Tokyo Bldg., 1-10,1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

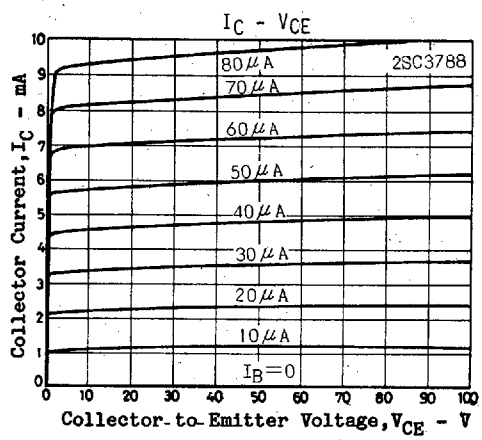
Continued from preceding page.

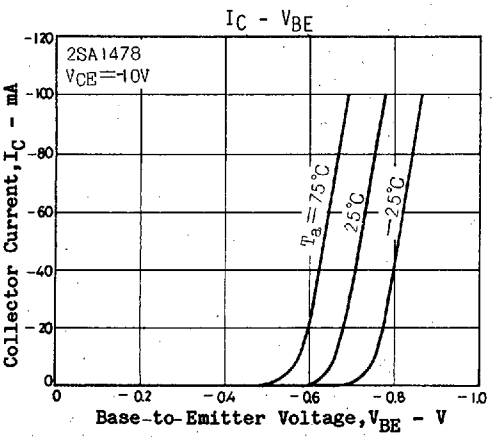
			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)10μA, I_E=0	(-)200			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)1mA, R_{BE}=∞	(-)200			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E=(-)10μA, I_C=0	(-)5			V

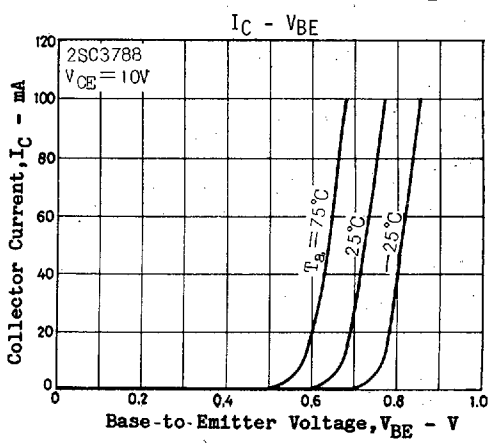




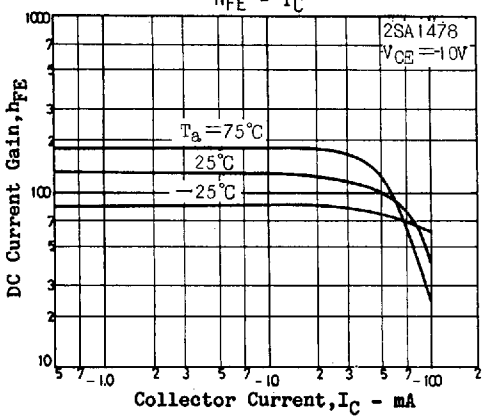




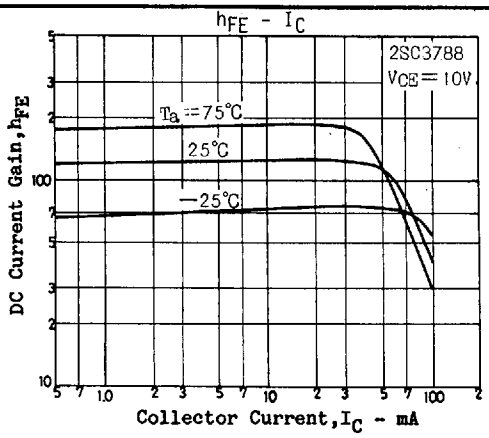




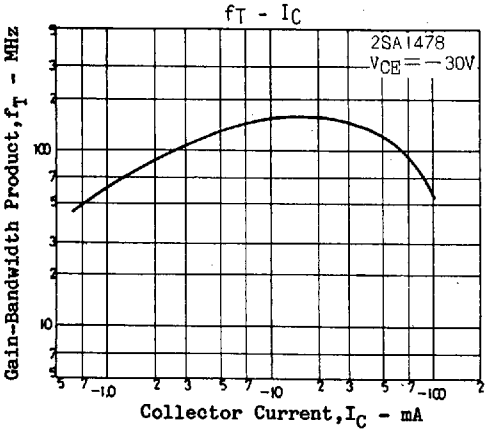
h_{FE} - I_C



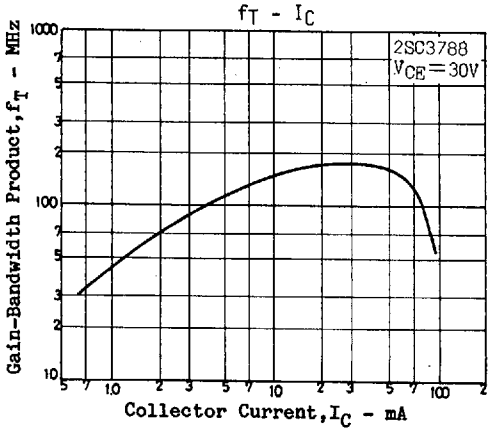
h_{FE} - I_C



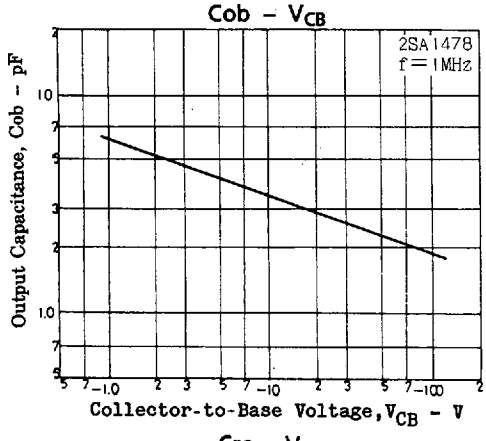
f_T - I_C



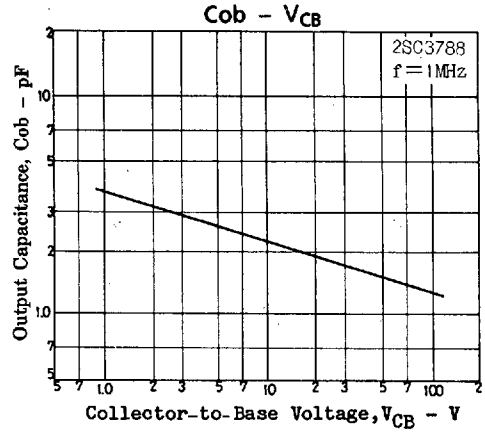
f_T - I_C



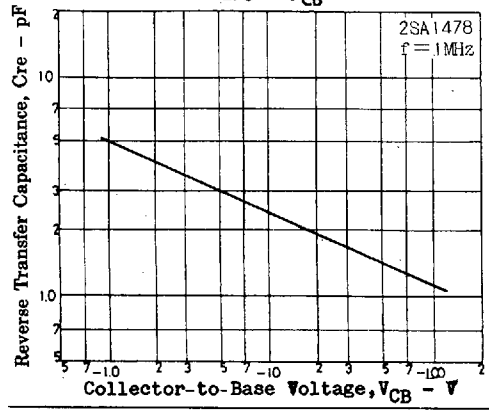
Cob - V_{CB}



Cob - V_{CB}



Cre - V_{CB}



Cre - V_{CB}