

SANYO

No.2253A

2SA1478/2SC3788

PNP/NPN Epitaxial Planar Type
Silicon TransistorsHIGH-DEFINITION CRT DISPLAY
VIDEO OUTPUT APPLICATIONS**Features**

- High breakdown voltage : $V_{CE0} \geq 200V$
- Small reverse transfer capacitance and excellent high frequency characteristic : $c_{re} = 1.2pF(NPN), 1.7pF(PNP)$
- Adoption of FBET process

(): 2SA1478

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}	(-)5	V
Collector Current	I_C	(-)100	mA
Peak Collector Current	i_{cp}	(-)200	mA
Collector Dissipation	P_C	1.3	W
	$T_c = 25^\circ C$	5	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

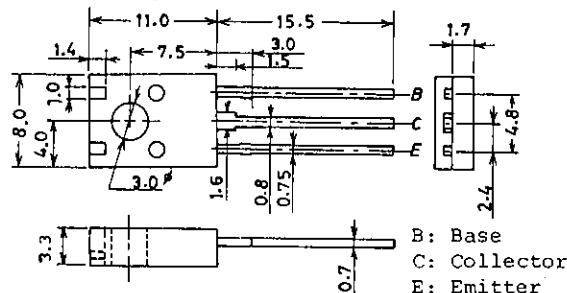
Electrical Characteristics at $T_a = 25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB} = (-)150V, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = (-)4V, I_C = 0$			(-)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	c_{ob}	$V_{CB} = (-)30V, f = 1MHz$		1.7		pF
				(2.6)		
Reverse Transfer Capacitance	c_{re}	$V_{CB} = (-)30V, f = 1MHz$		1.2		pF
				(1.7)		
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)20mA, I_E = (-)2mA$			(-)0.6	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)20mA, I_E = (-)2mA$			(-)1.0	V

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

40	C	80	60	D	120	100	E	200	160	F	320
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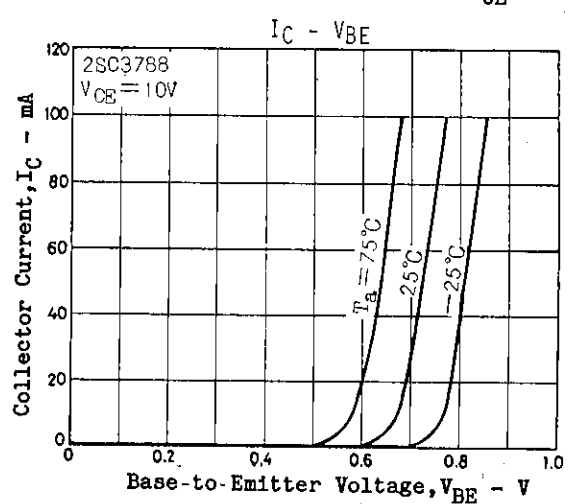
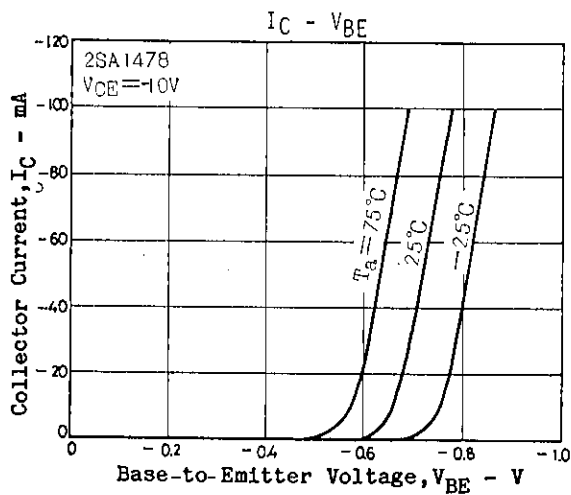
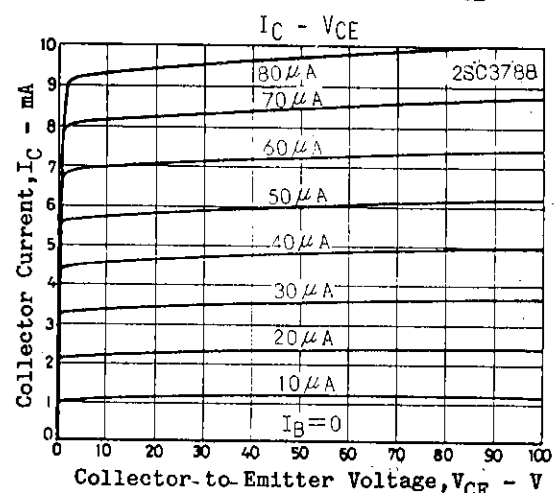
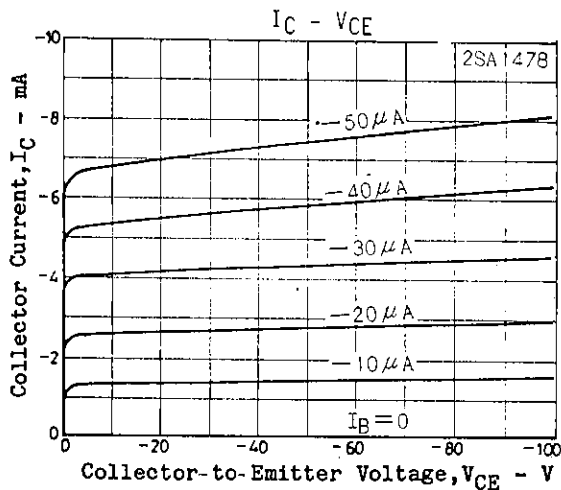
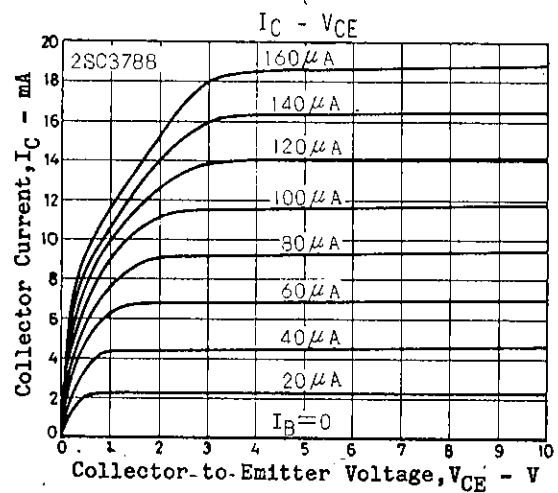
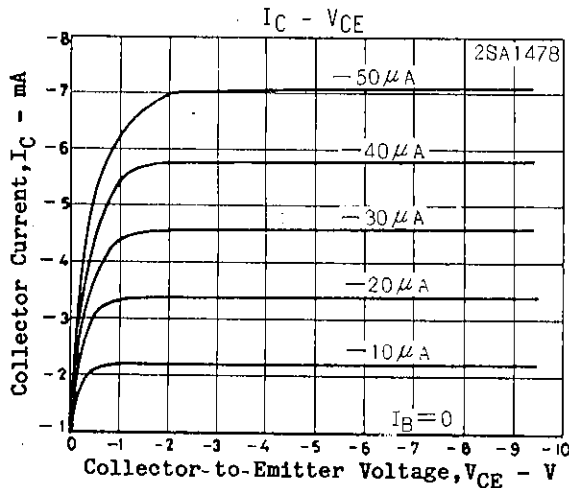
**Package Dimensions 2042A
(unit:mm)**

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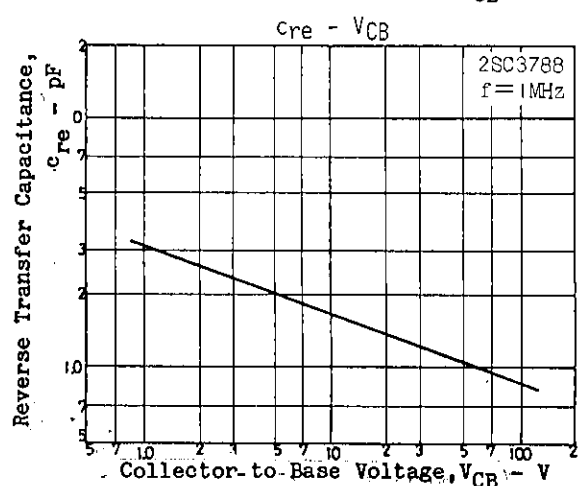
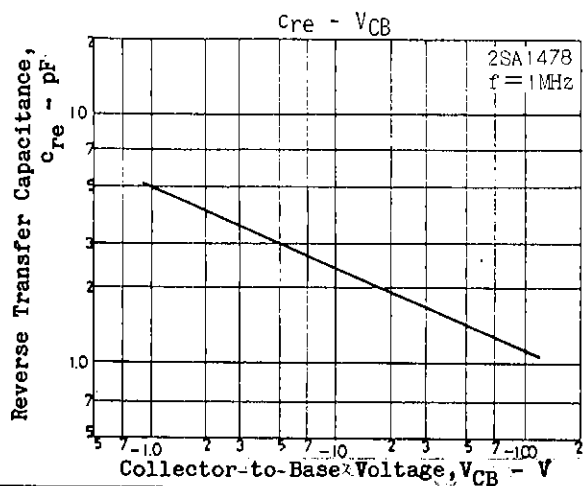
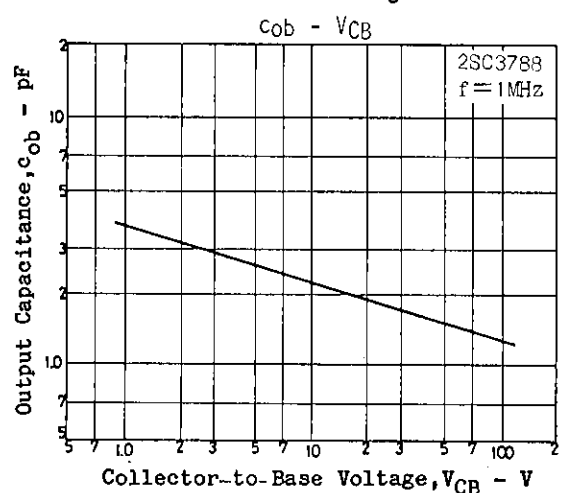
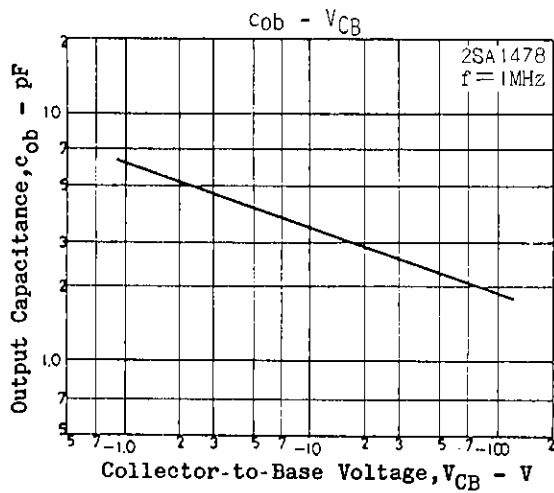
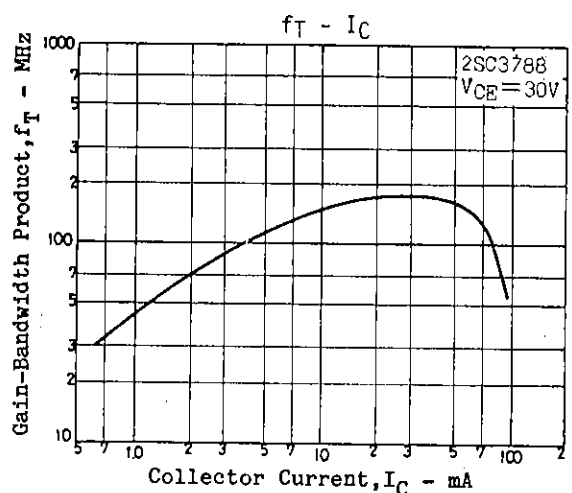
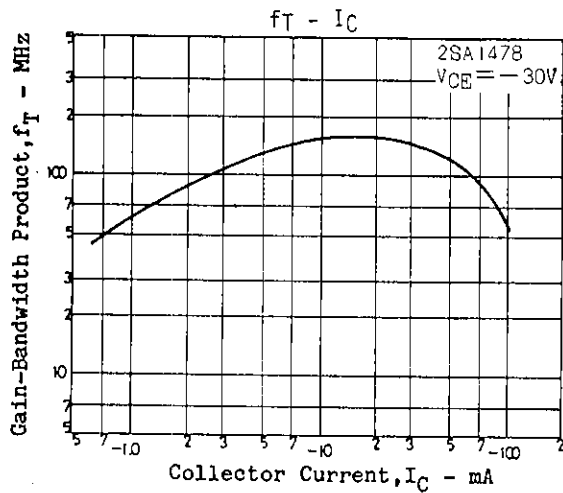
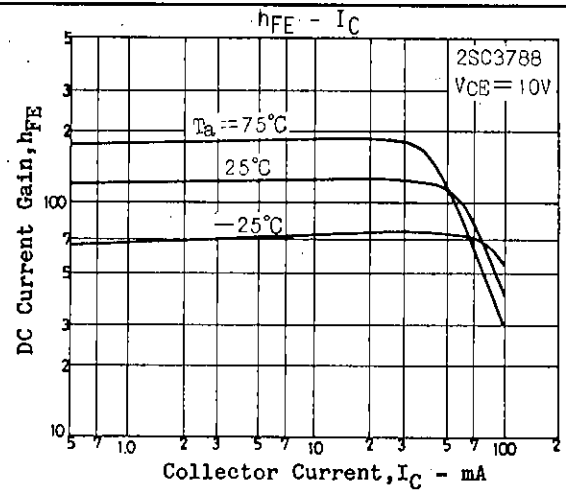
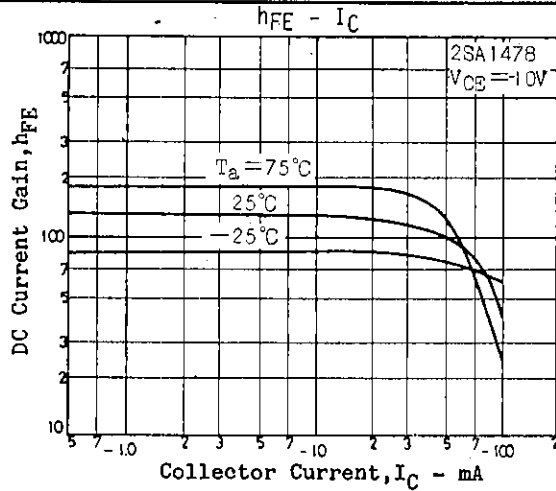
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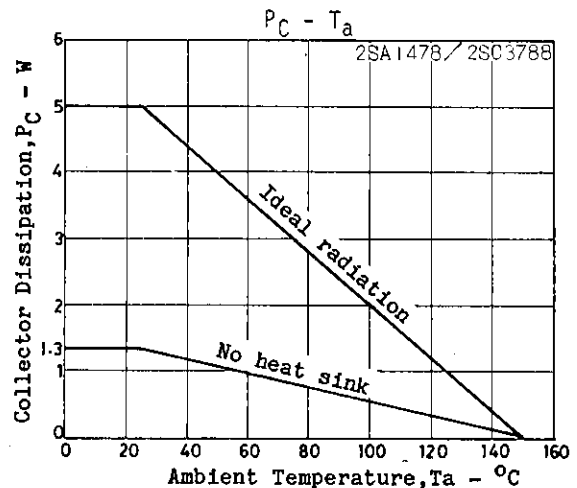
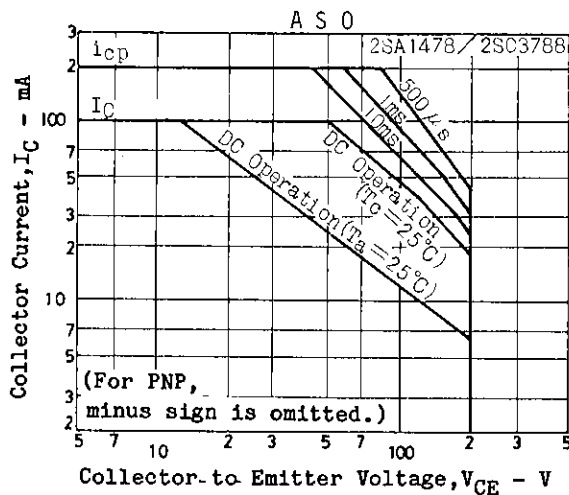
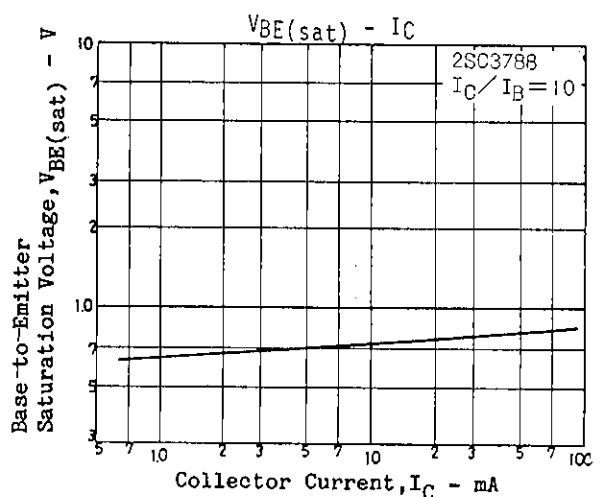
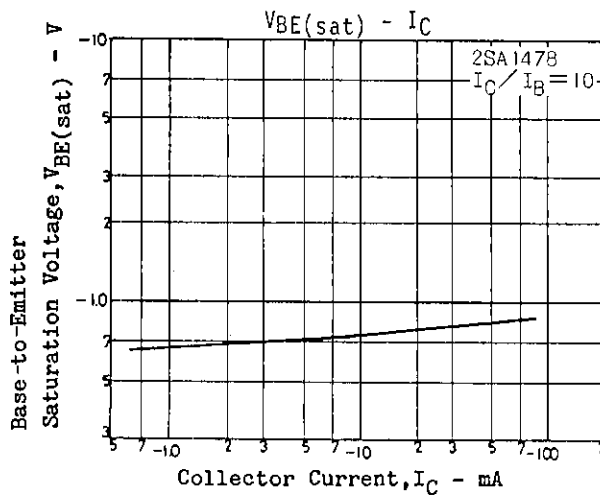
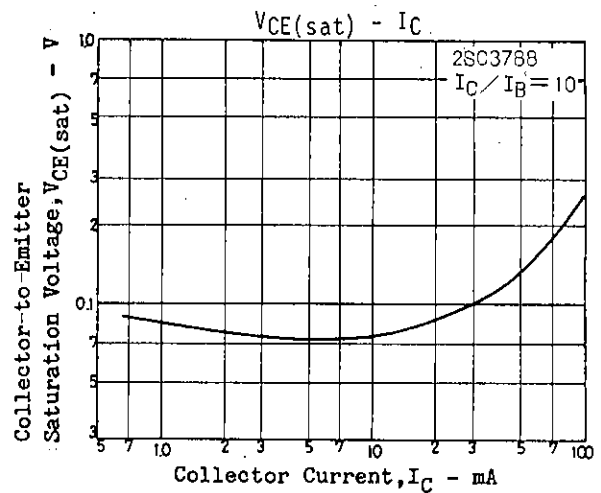
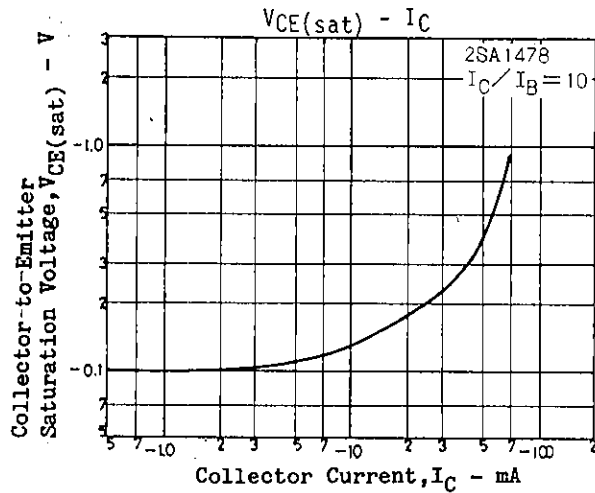
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			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-) 10 \mu A, I_E = 0$	(-)	200		V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-) 1 mA, R_{BE} = \infty$	(-)	200		V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-) 10 \mu A, I_C = 0$	(-)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



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