

High-Definition CRT Display
Video Output Applications

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

Parameter	Symbol	Value	Unit
Collector-to-Base Voltage	V_{CBO}	(-)200	V
Collector-to-Emitter Voltage	V_{CEO}	(-)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
		5	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^{\circ}\text{C}$

			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	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

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

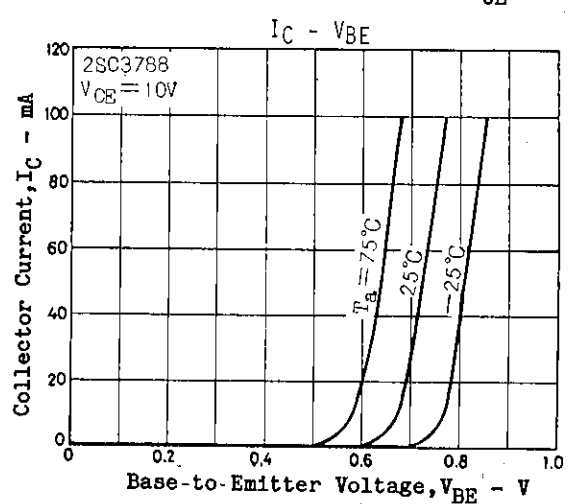
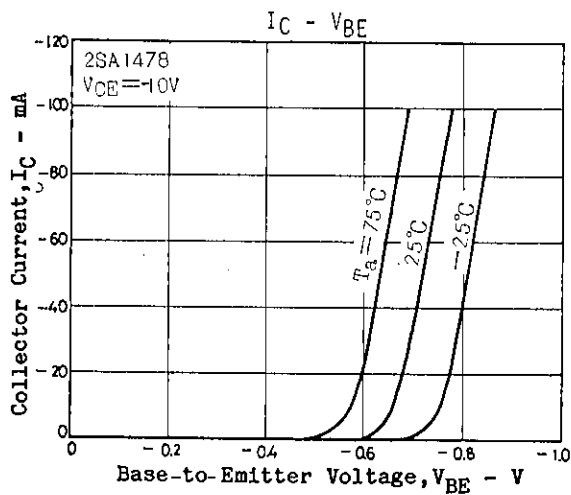
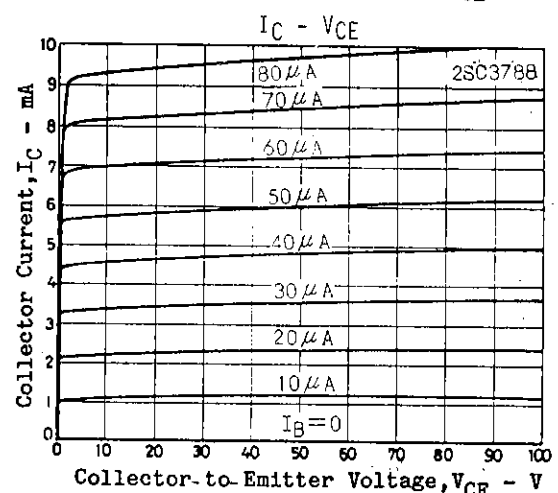
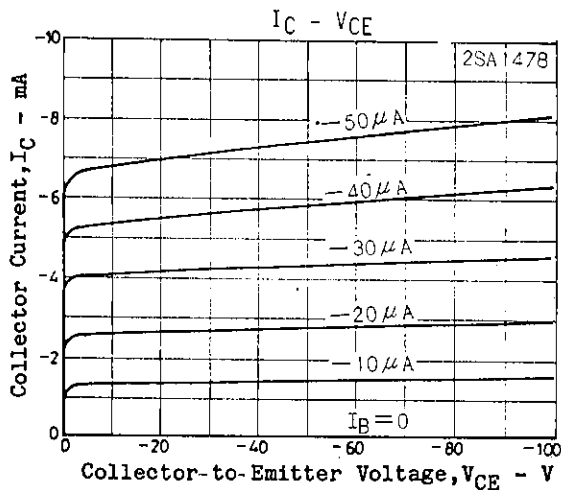
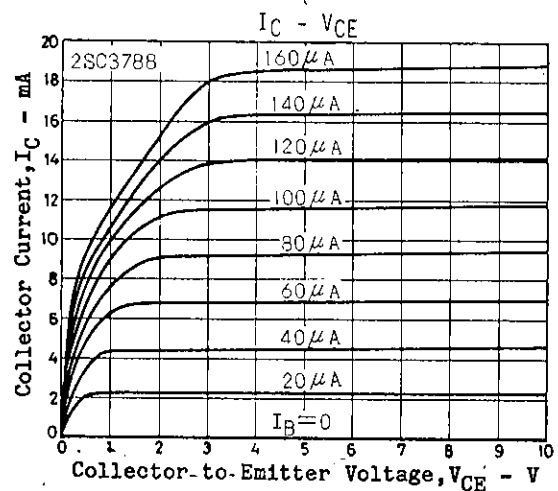
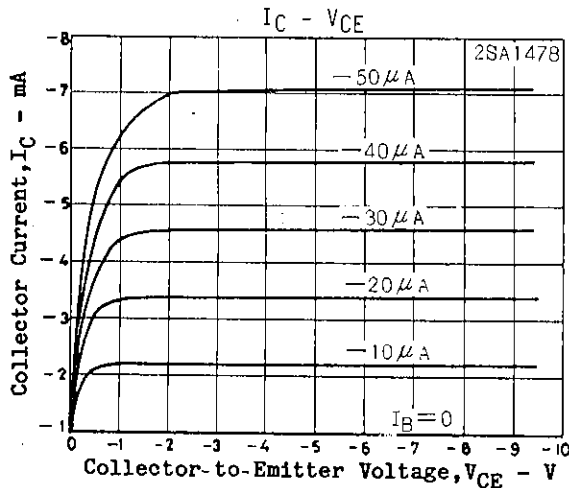
40	C	80	60	D	120	100	E	200	160	F	320
----	---	----	----	---	-----	-----	---	-----	-----	---	-----

Technical drawing of a transistor assembly showing dimensions and component labels. The drawing includes a top view of the transistor body with dimensions: 11.0, 15.5, 1.4, 7.5, 3.0, 1.5, 8.0, 4.0, 3.0, 1.6, 0.8, 0.75, 1.7, 4.8, 2.4, and 3.3. The components are labeled: B: Base, C: Collector, and E: Emitter.

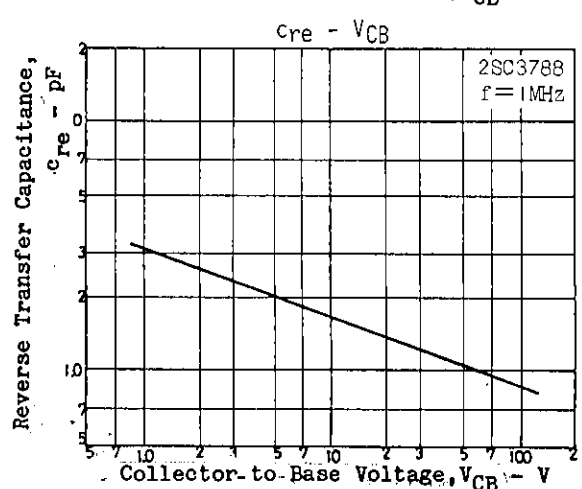
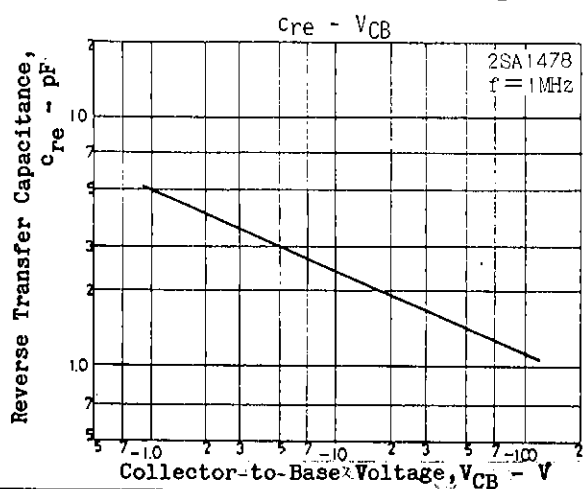
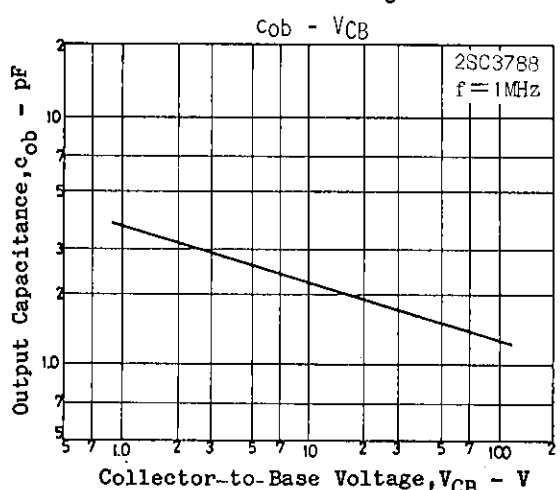
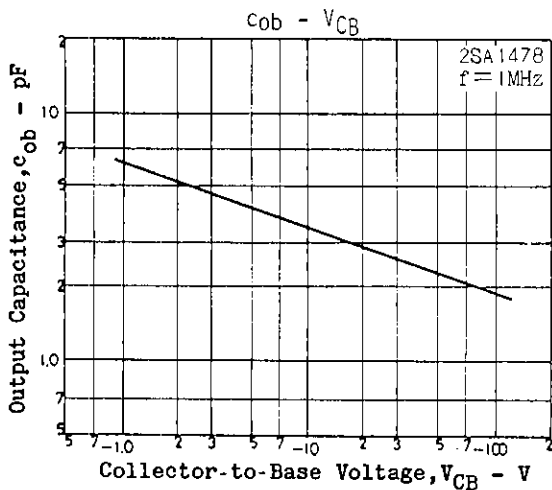
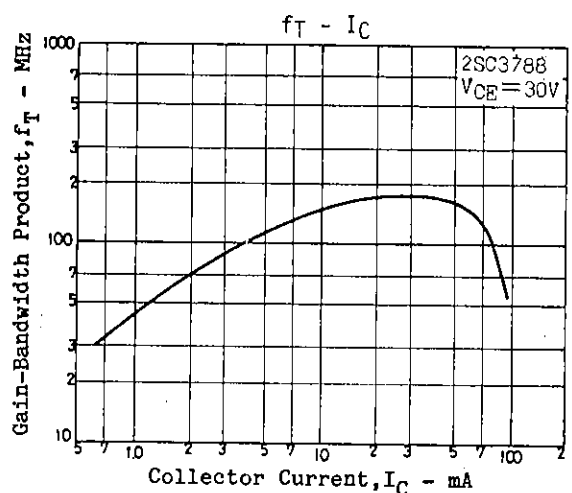
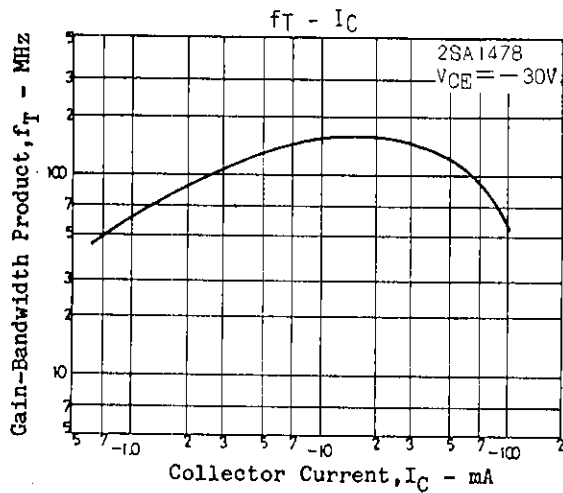
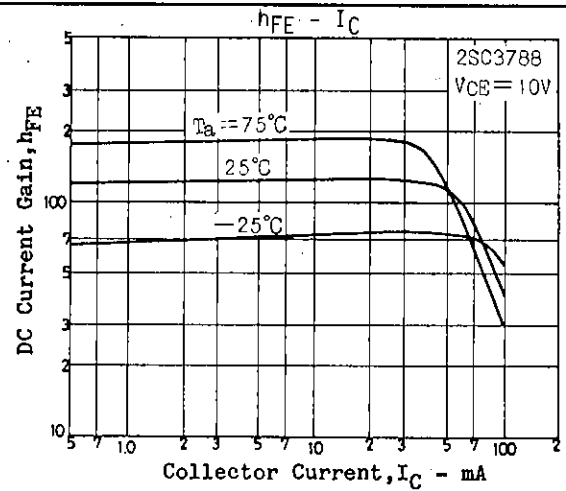
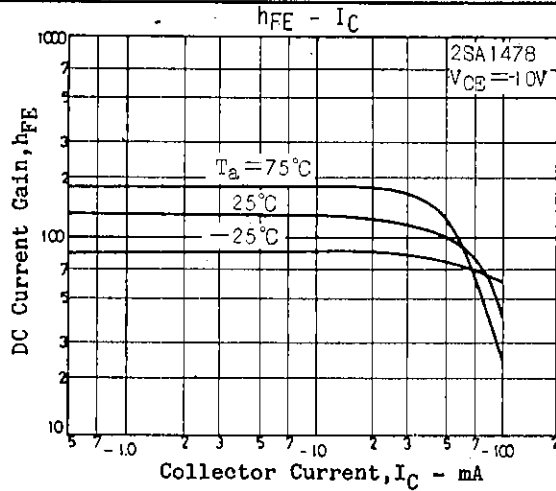
SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

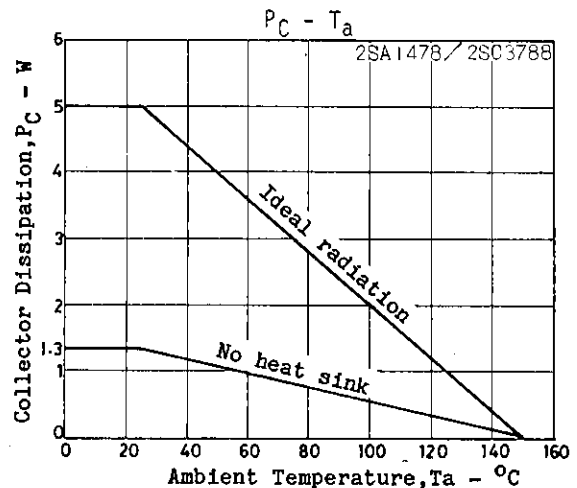
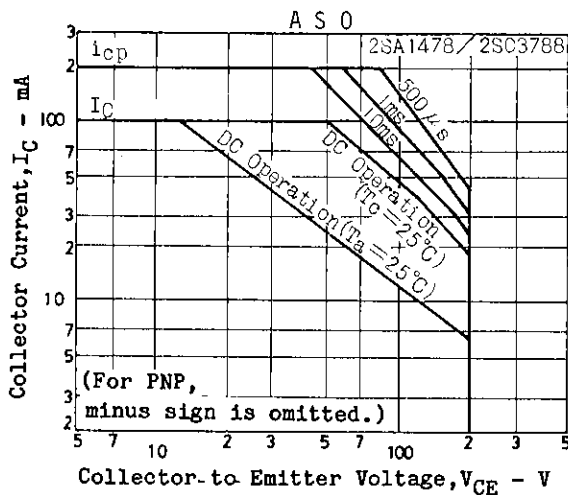
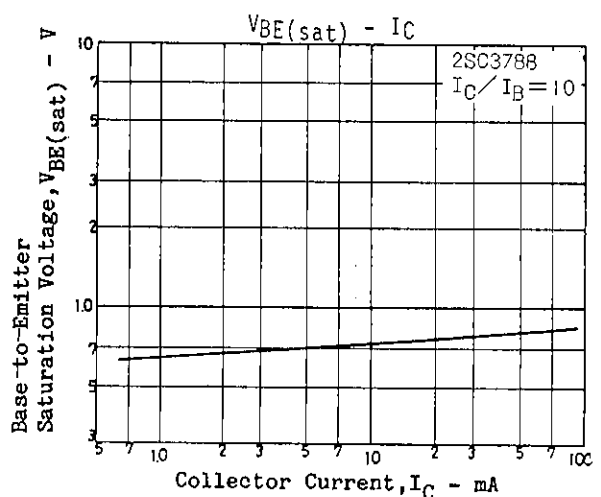
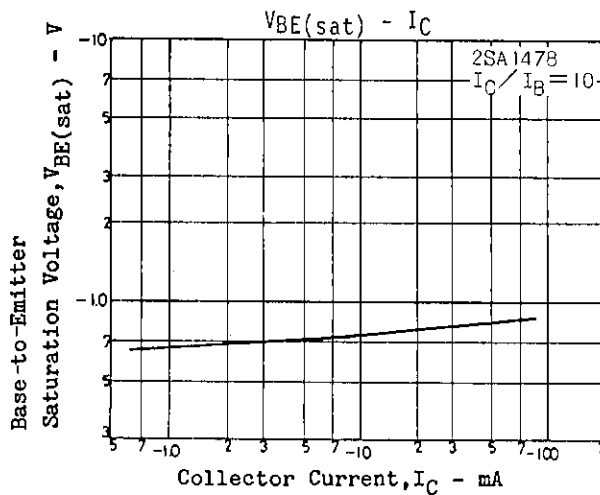
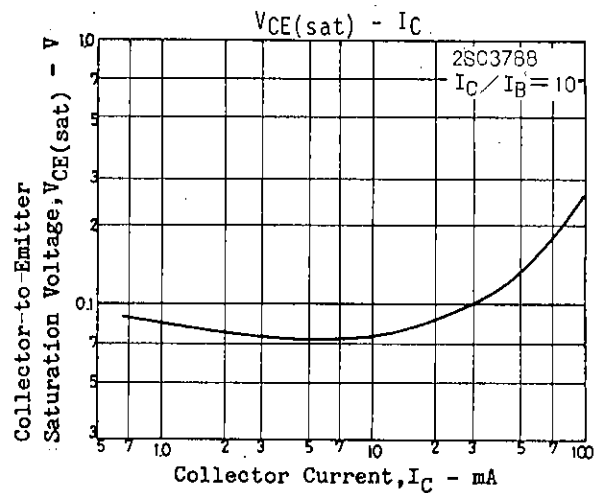
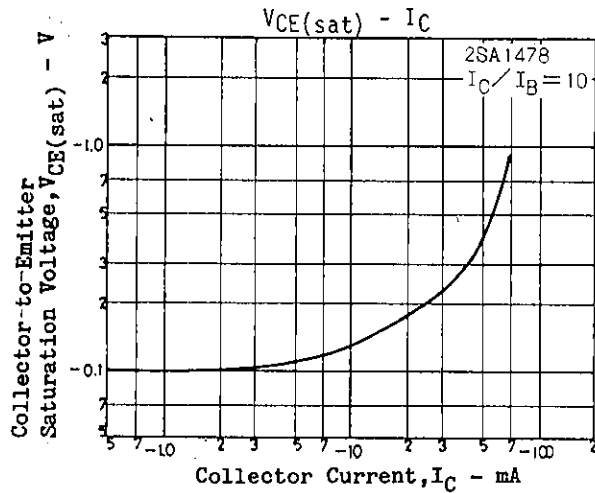
Continued from preceding page.

			min	typ	max	unit
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-) 10 \mu A, I_E = 0$	(-)	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



2SA1478/2SC3788





■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.