

SANYO

No.2253A

2SA1478/2SC3788

PNP/NPN Epitaxial Planar Silicon Transistor

High-Definition CRT Display
Video Output Applications**Features**

- 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

(): 2SA1478

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

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	T _j	150			°C
Storage Temperature	T _{stg}	-55 to +150			°C

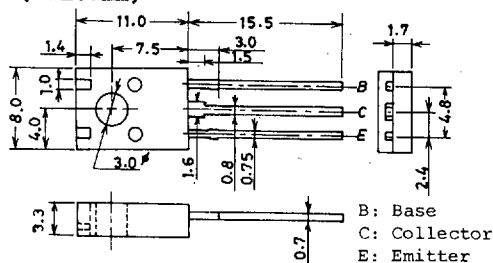
Electrical Characteristics at $T_a = 25^\circ C$

			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	$V_{CE(sat)}$	$I_C = (-)20mA, I_B = (-)2mA$			(-)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)**

SANYO: TO126ML

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

