

SANYO	No.2089B	2SA1477/2SC3787
		PNP/NPN Epitaxial Planar Silicon Transistors

High-Voltage Switching Applications

Applications

- Predrivers for 100W power amplifiers.

Features

- Adoption of FBET process.
- Excellent linearity of h_{FE} .
- Small Cob.
- Plastic-covered heat sink facilitating high-density mounting (TO126ML package).

() : 2SA1477

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

			unit
Collector-to-Base Voltage	V_{CBO}	(-) 180	V
Collector-to-Emitter Voltage	V_{CEO}	(-) 160	V
Emitter-to-Base Voltage	V_{EBO}	(-) 5	V
Collector Current	I_C	(-) 140	mA
Collector Current (Pulse)	I_{CP}	(-) 200	mA
Collector Dissipation	P_C	1.3	W
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to $+150$	$^\circ\text{C}$

$T_c = 25^\circ\text{C}$

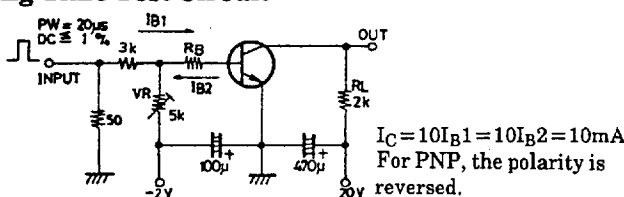
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)120\text{V}, I_E = 0$		(-) 100		nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$		(-) 100		nA
DC Current Gain	h_{FE}^*	$V_{CE} = (-)5\text{V}, I_C = (-)10\text{mA}$	100		400	
Gain Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)10\text{mA}$		150		MHz
Output Capacitance	Cob	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		(4.0)		pF
				3.0		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)50\text{mA}, I_B = (-)5\text{mA}$		(-140)	(-400)	mV
				70	300	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)50\text{mA}, I_B = (-)5\text{mA}$			1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-180)			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-160)			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu\text{A}, I_C = 0$	(-5)			V
Rise Time	t_{on}	See specified Test Circuit.		0.1		μs
Storage Time	t_{stg}	"		1.5		μs
Fall Time	t_f	"		0.1		μs

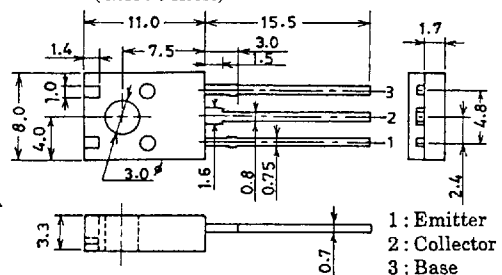
* : The 2SA1477/2SC3787 are classified by 10mA h_{FE} as follows : **Package Dimensions** 2042B

100 R	200	140 S	280	200 T	400
-------	-----	-------	-----	-------	-----

Switching Time Test Circuit



Unit (Resistance : Ω , Capacitance : F)



SANYO: TO126ML

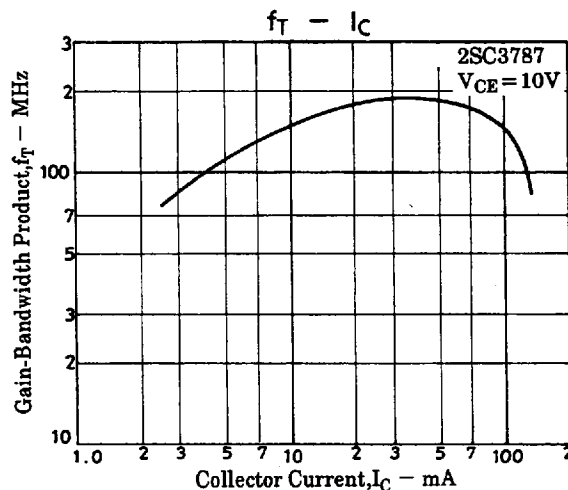
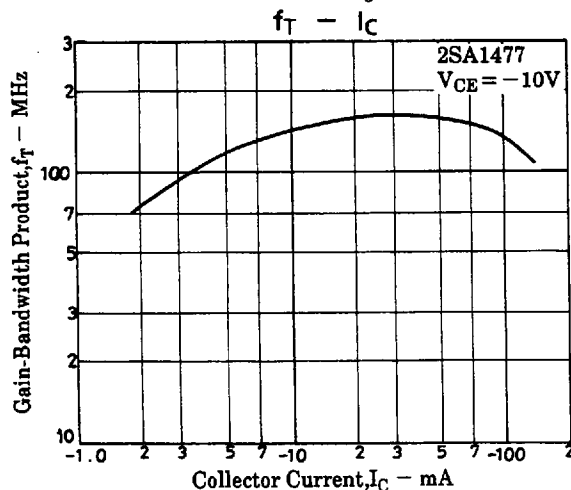
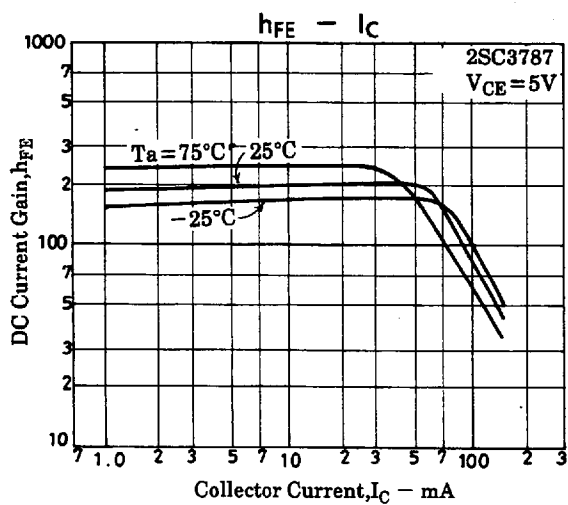
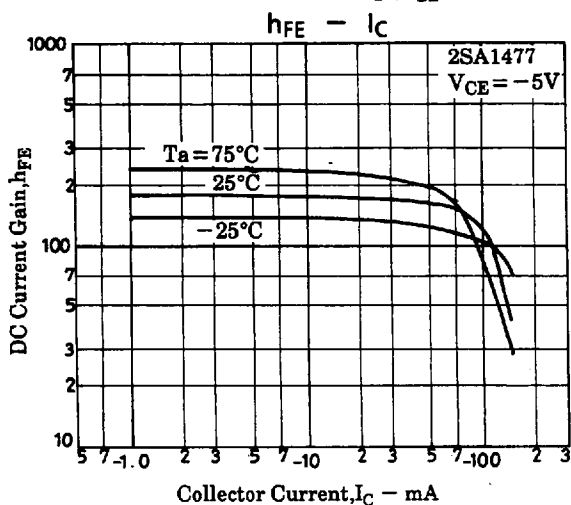
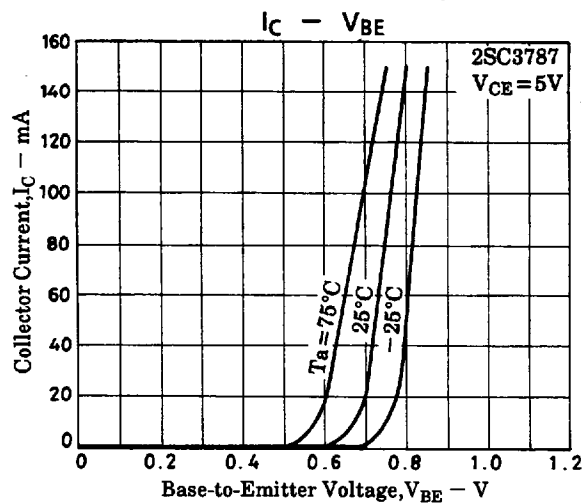
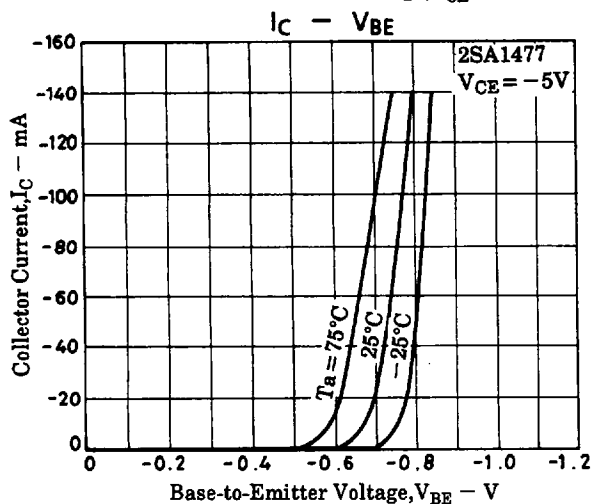
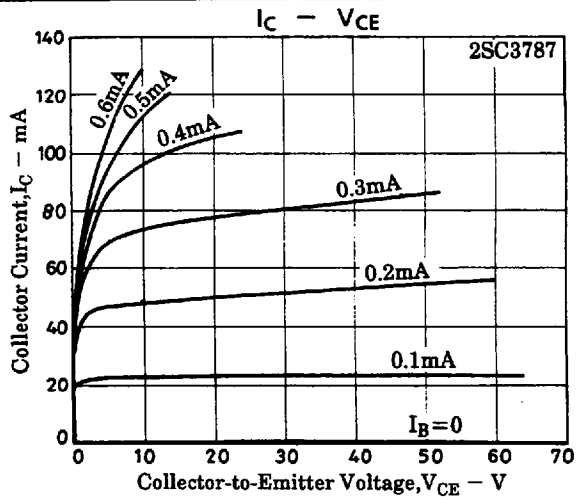
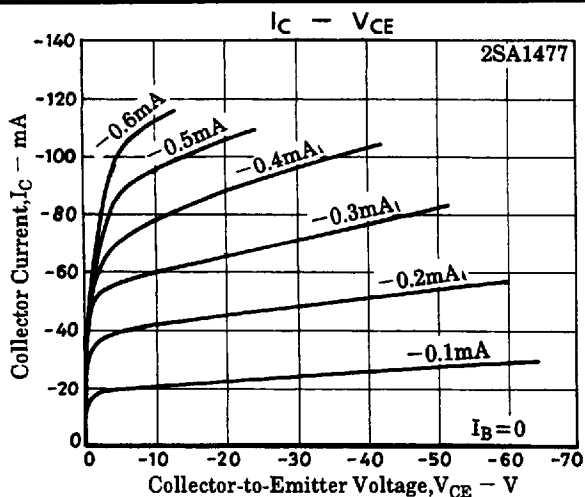
SANYO Electric Co., Ltd. Semiconductor Business Headquarters

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

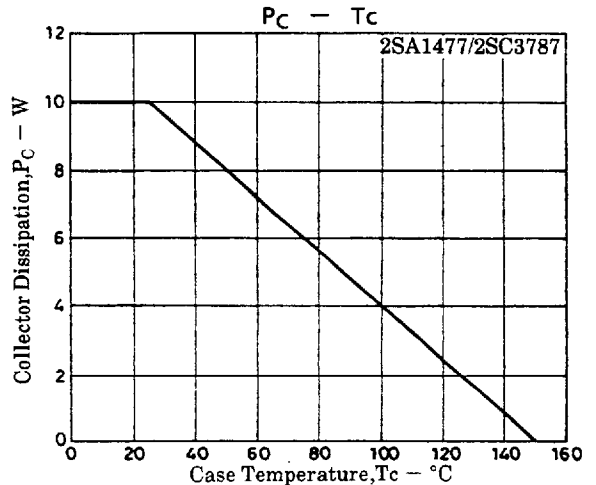
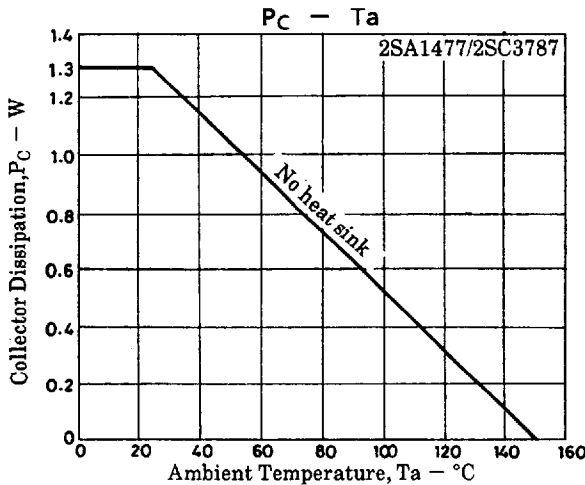
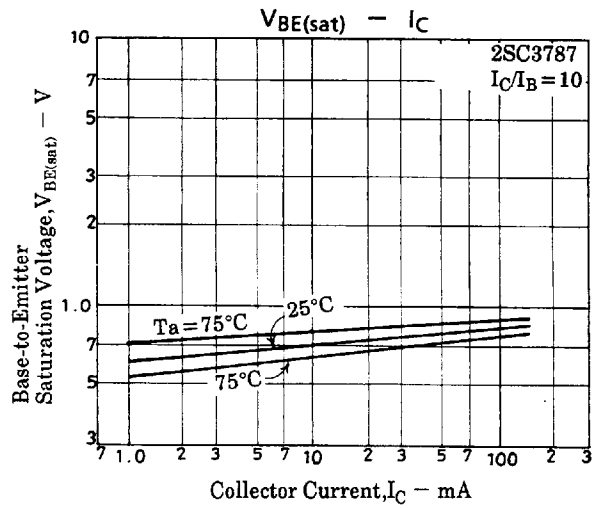
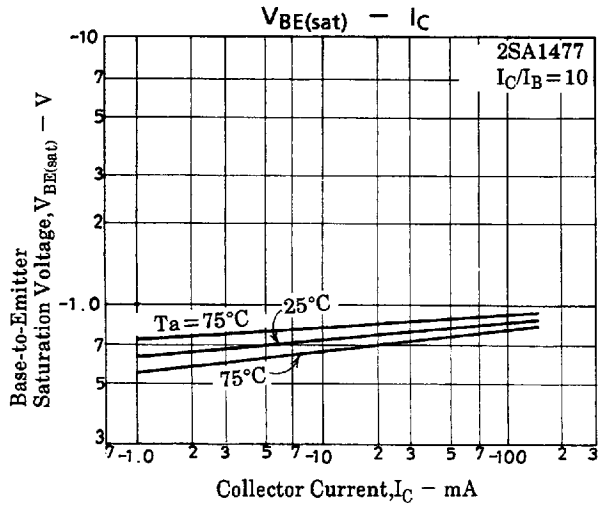
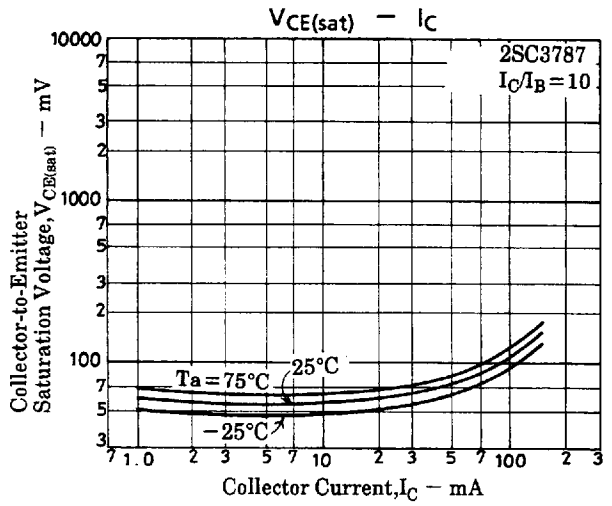
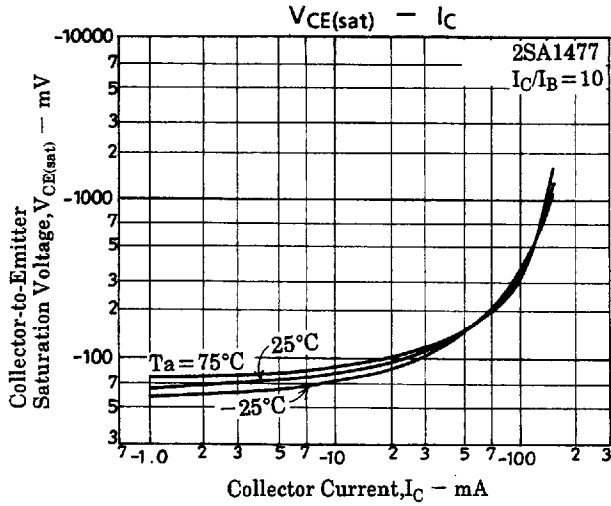
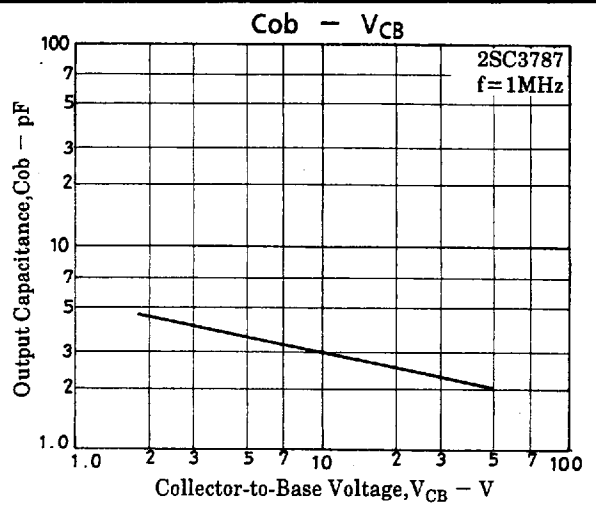
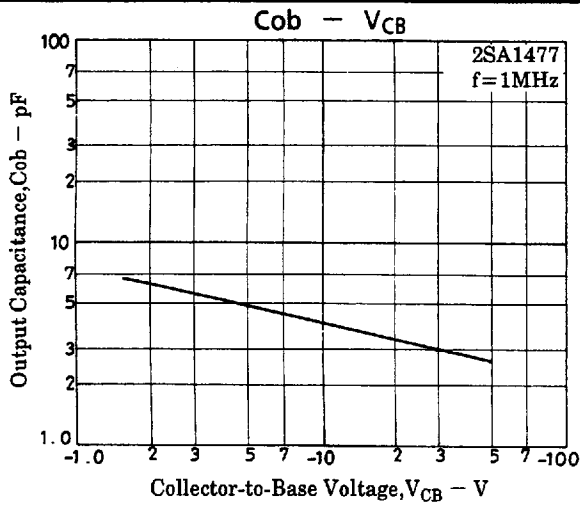
7997076 0016353 38T

10996TS (KOTO) 8-8491/5197TA, TS No.2089-1/4

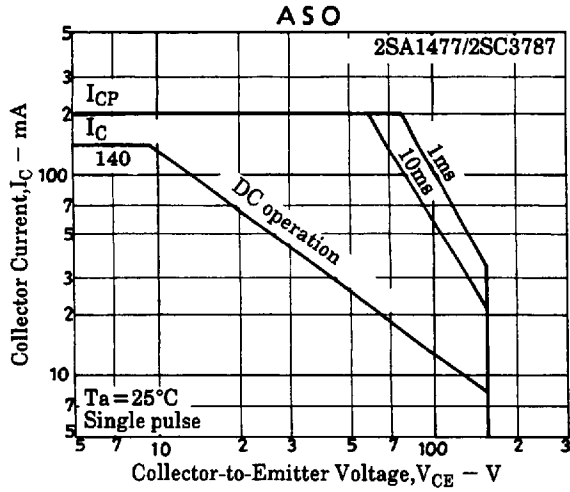
2SA1477/2SC3787



2SA1477/2SC3787



2SA1477/2SC3787



- 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.

This catalog provides information as of January, 1996. Specifications and information herein are subject to change without notice.