

SANYO

No.2089B

2SA1477/2SC3787

PNP/NPN Epitaxial Planar Silicon Transistors

160V/140mA 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 $T_a = 25^\circ\text{C}$

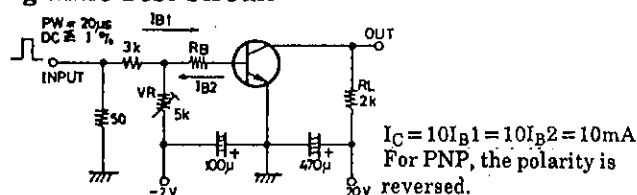
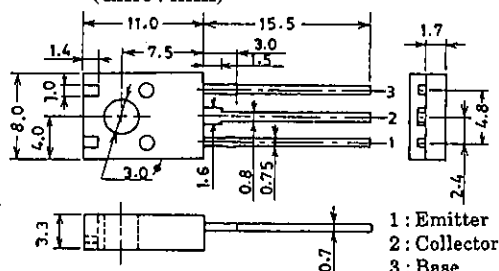
			unit
Collector-to-Base Voltage	V_{CBO}	(-)180	V
Collector-to-Emitter Voltage	V_{CEO}	(-)160	V
Emitter-to-Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)140	mA
Collector Current (Pulse)	I_{CP}	(-)200	mA
Collector Dissipation	P_C	1.3	W
		10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage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

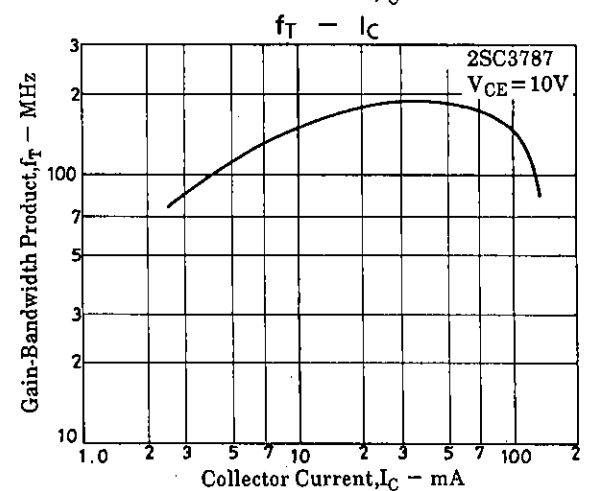
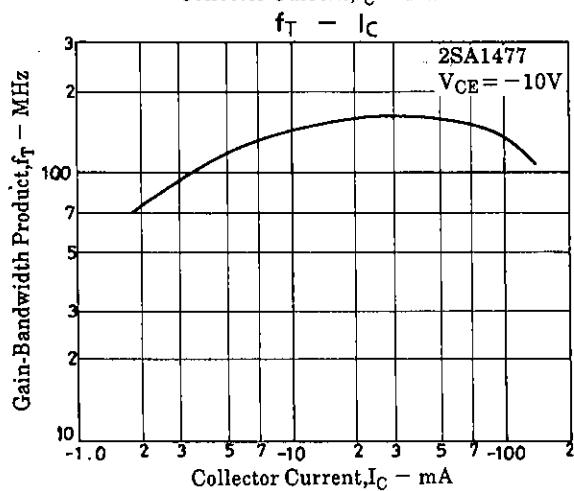
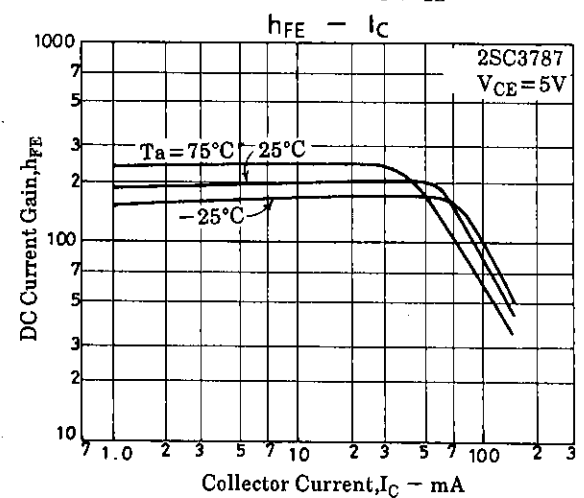
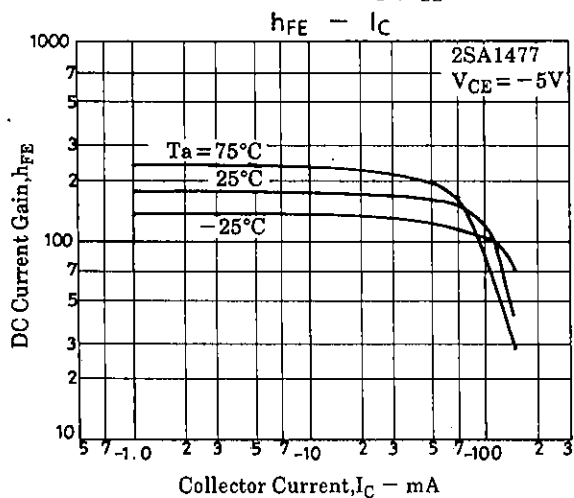
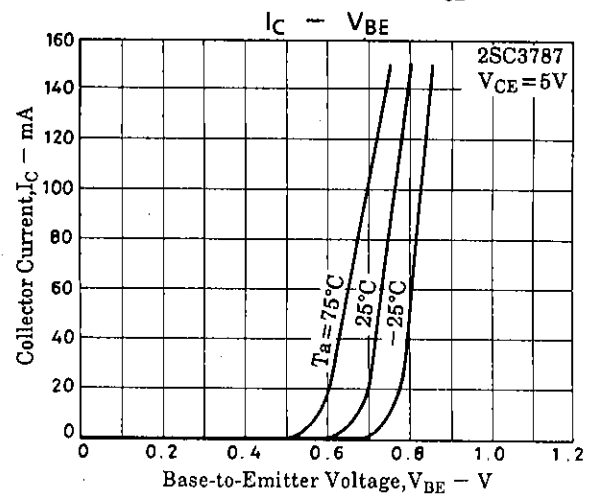
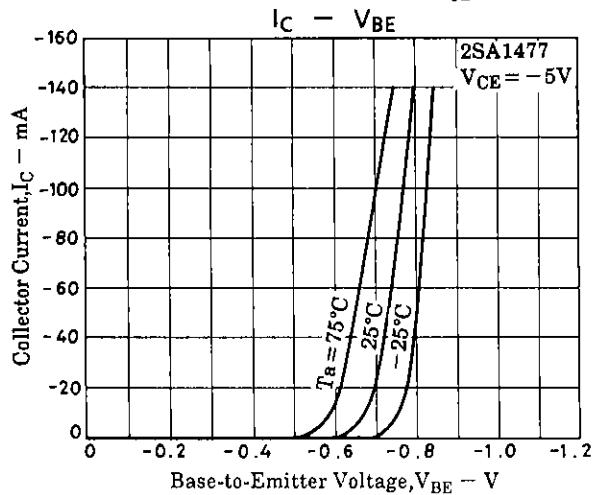
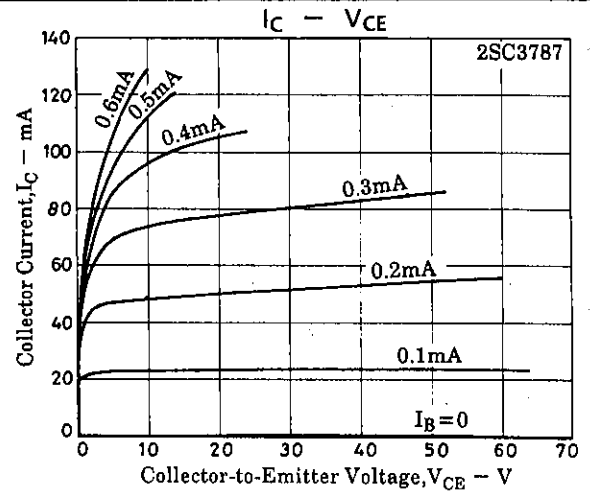
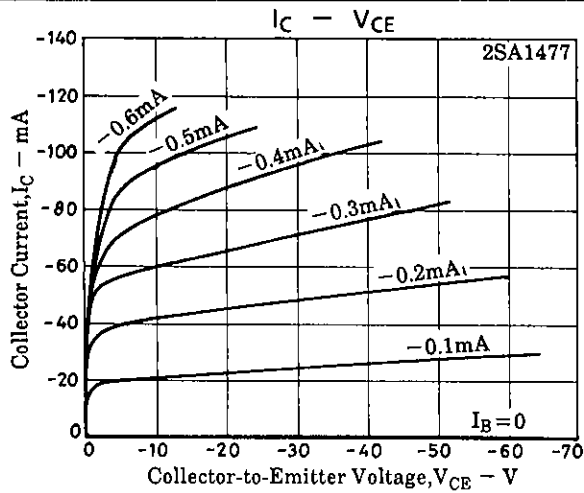
※ : The 2SA1477/2SC3787 are classified by 10mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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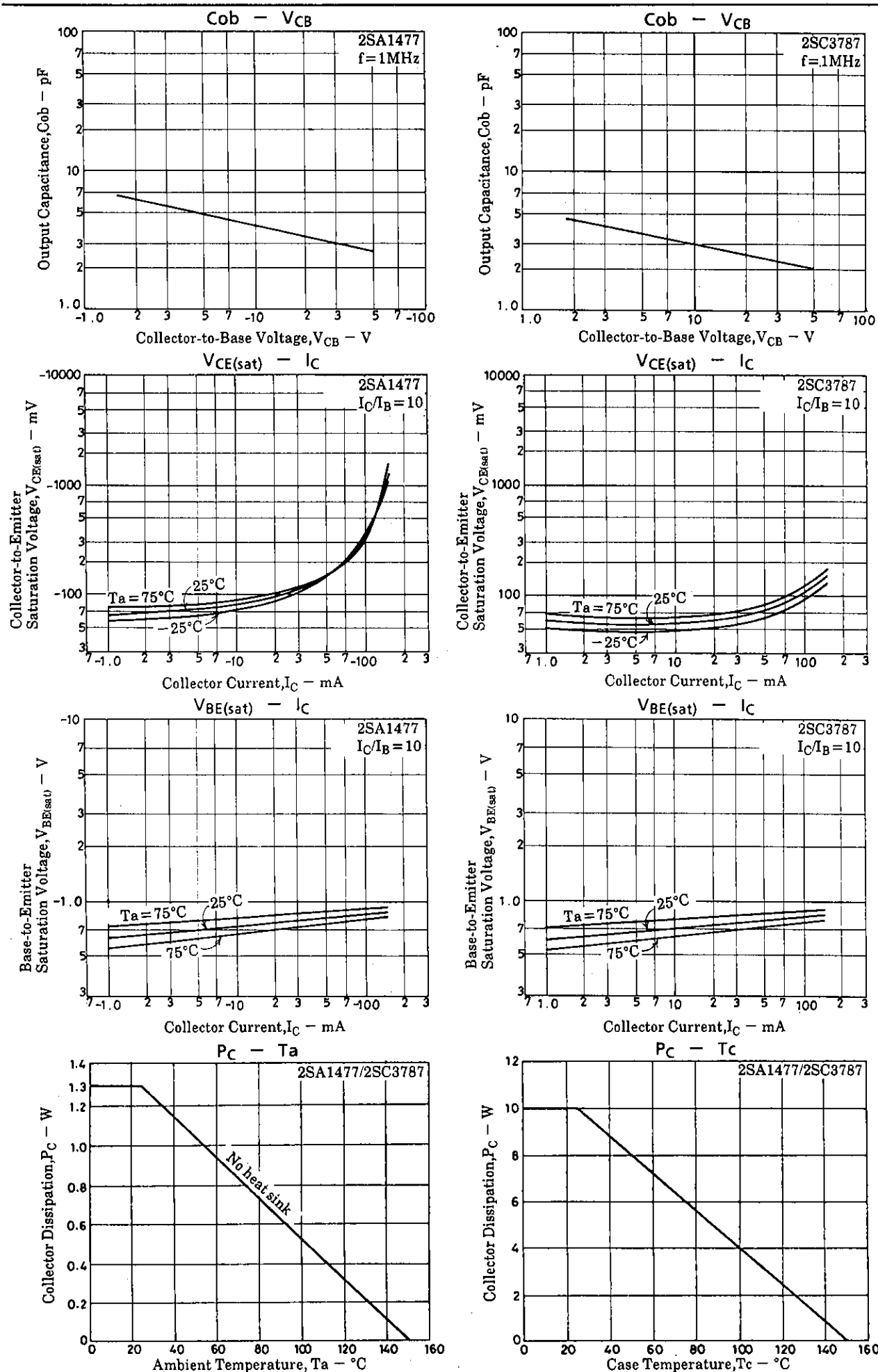
Switching Time Test CircuitUnit (Resistance : Ω , Capacitance : F)**Package Dimensions 2042B (unit : mm)**

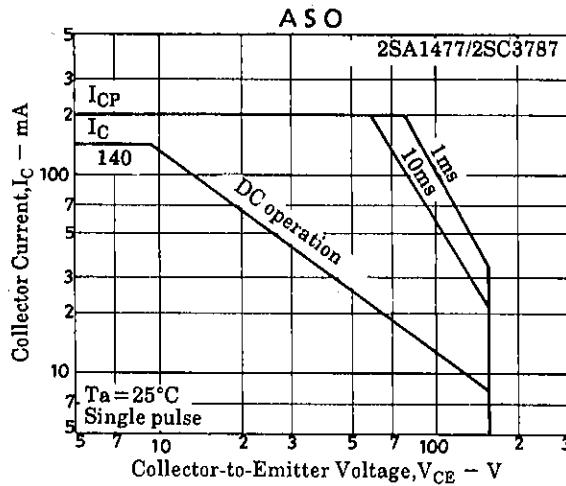
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2SA1477/2SC3787





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