

**2SC4836****20V/5A Switching Applications****Applications**

- Strobes, power supplies, relay drivers, lamp drivers.

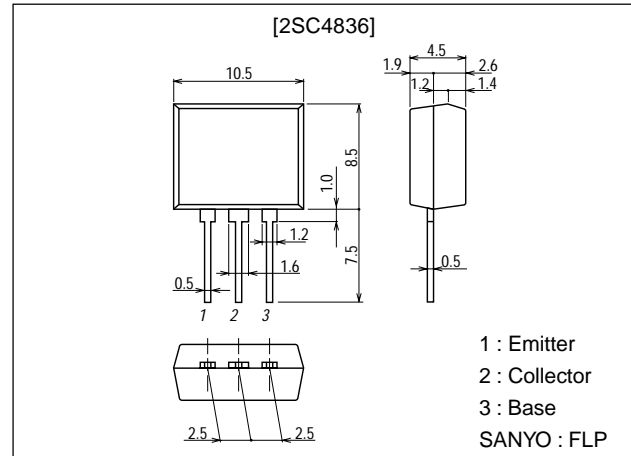
**Features**

- Large allowable collector dissipation.
- Low saturation voltage.
- Large current capacity.
- Fast switching speed.
- Usage of radial taping to meet automatic mounting.

**Package Dimensions**

unit:mm

2084B

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		60	V
Collector-to-Emitter Voltage	$V_{CE0}$		20	V
Emitter-to-Base Voltage	$V_{EBO}$		6	V
Collector Current	$I_C$		5	A
Collector Current (Pulse)	$I_{CP}$		8	A
Collector Dissipation	$P_C$		1.5	W
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

**Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=50V, I_E=0$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			100	nA
DC Current Gain	$h_{FE1}$	$V_{CE}=2V, I_C=500mA$	120*		560*	
	$h_{FE2}$	$V_{CE}=2V, I_C=3A$	95			
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=50mA$		120		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		45		pF

\* : The 2SC4836 is classified by 500mA  $h_{FE}$  as follows :

120	E	200	160	F	320	280	G	560
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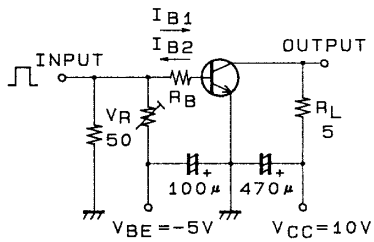
# 2SC4836

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3A, I_B=60mA$		220	500	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=3A, I_B=60mA$			1.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	20			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Turn ON Time	$t_{on}$	See specified Test Circuit.		30		ns
Storage Time	$t_{stg}$	See specified Test Circuit.		300		ns
Fall Time	$t_f$	See specified Test Circuit.		40		ns

## Switching Time Test Circuit

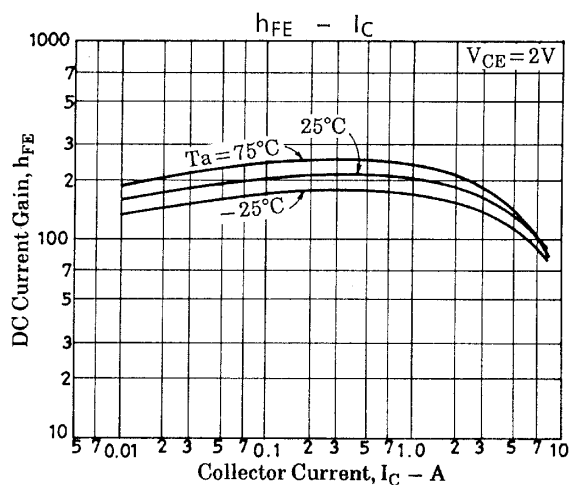
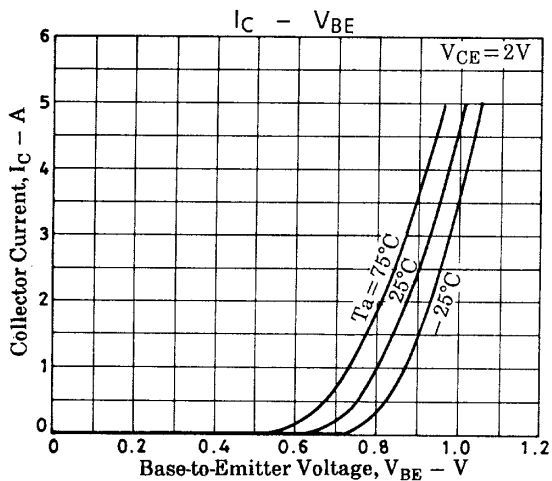
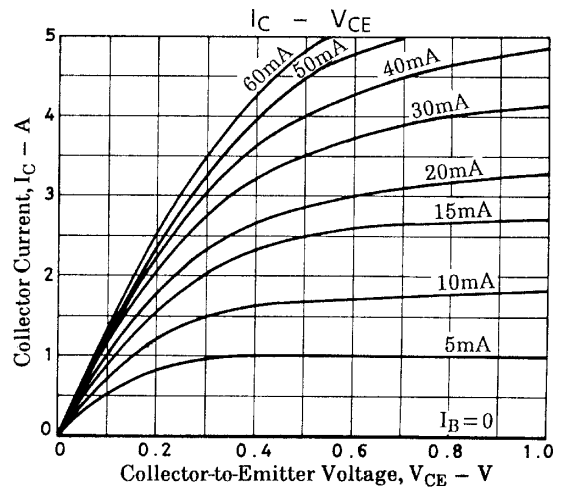
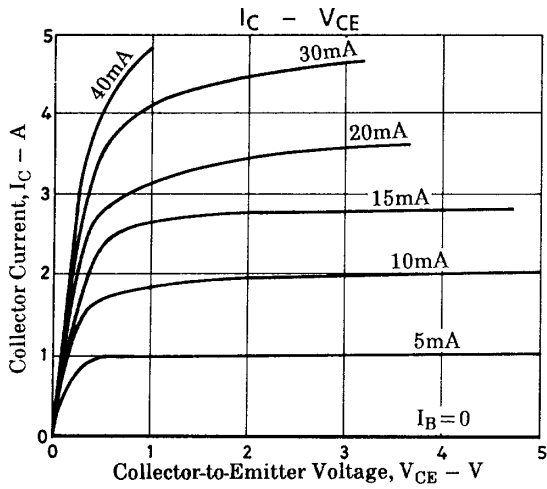
PW = 20  $\mu$ s

DC  $\leq$  1%

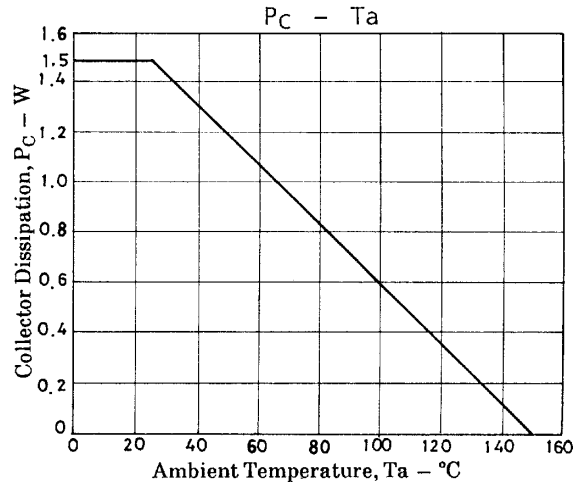
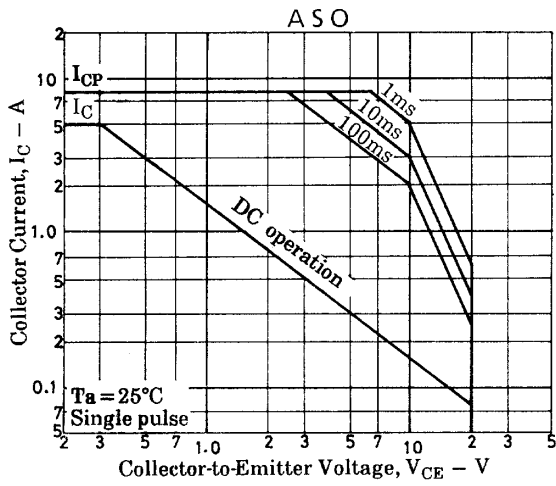
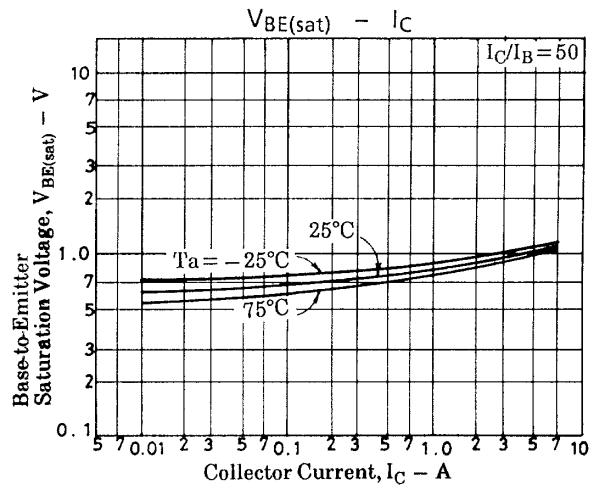
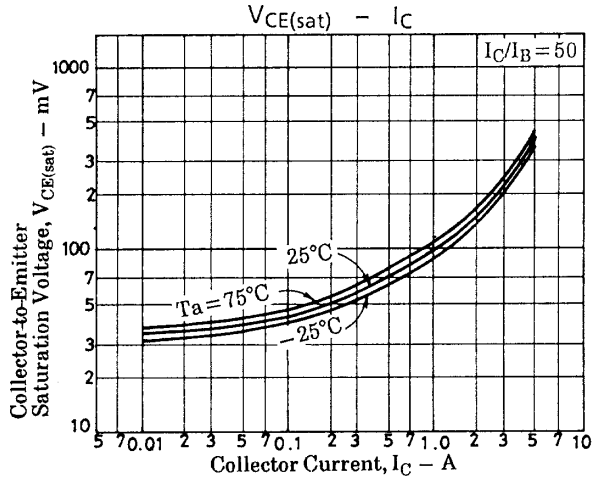
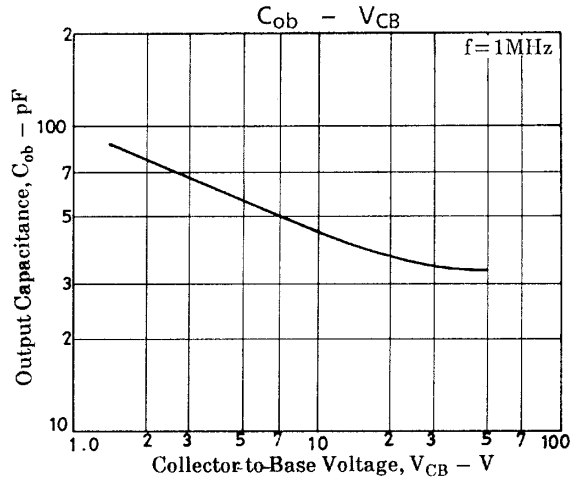
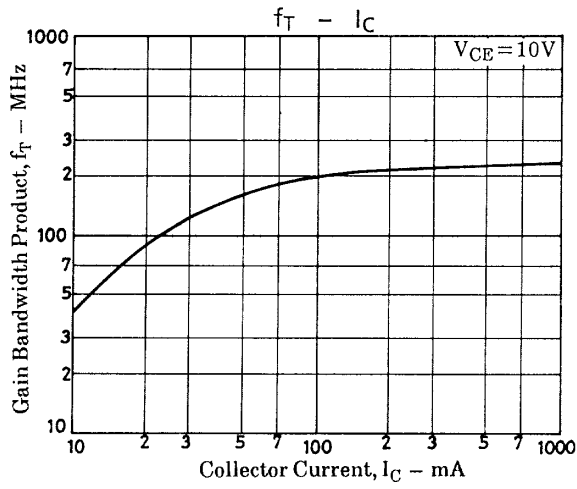


$$I_C = 10I_{B1} = -10I_{B2} = 2A \quad A00652$$

Unit (resistance :  $\Omega$ , capacitance : F)



# 2SC4836



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