

SANYO

2SA1883

High-Speed Switching Applications

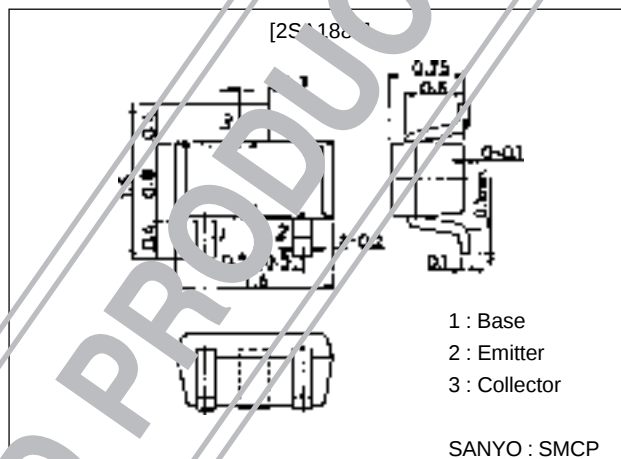
Features

- Fast switching speed.
- Low collector saturation voltage.
- High gain-bandwidth product.
- Small collector capacitance.
- Very small-sized package permitting 2SA1883-applied sets to be made small and slim.
- Complementary pair with the 2SC4987.

Package Dimensions

unit:mm

2106A



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		−15	V
Collector-to-Emitter Voltage	V_{CEO}		−15	V
Emitter-to-Base Voltage	V_{EB0}		−5	V
Collector Current	I_C		−200	mA
Collector Current (Pulse)	I_{CP}		−500	mA
Base Current	I_B		−40	mA
Collector Dissipation	P_C		150	mW
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		−55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=-8V, I_E=0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-3V, I_C=0$			-0.1	μA
DC Current Gain	β_{FE}	$V_{CE}=-1V, I_C=-10mA$	50	80	140	
Gain-Bandwidth Product	f_T^*	$V_{CE}=-10V, I_C=-10mA$	450	1000		MHz
Output Capacitance	C_{ob}^*	$V_{CB}=-5V, f=1MHz$		1.8	3.0	pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10mA, I_B=-1mA$		-0.07	-0.20	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-10mA, I_B=-1mA$		-0.80	-0.90	V

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91098HA (KT)/81094MT BX-1673, BX-0842 No.4660-1/4

2SA1883

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		11		ns
Storage Time	t_{stg}	See specified Test Circuit.		21		ns
Turn-OFF Time	t_{off}	See specified Test Circuit.		19		ns

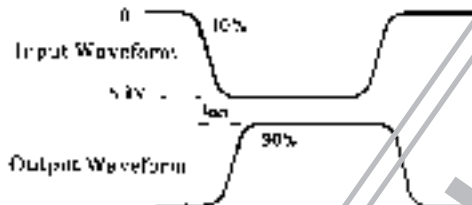
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Switching Time Test Circuit

t_{on}, t_{off} Test Circuit



t_{on} Test Waveform ($V_{BB} = GND$)



t_{off} Test Waveform ($V_{BB} = -8.0V$)

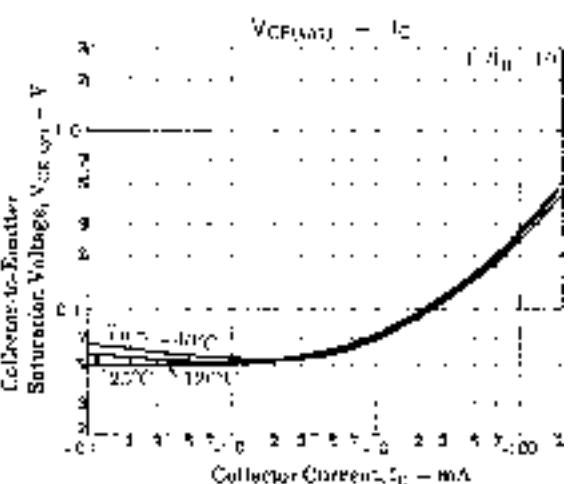
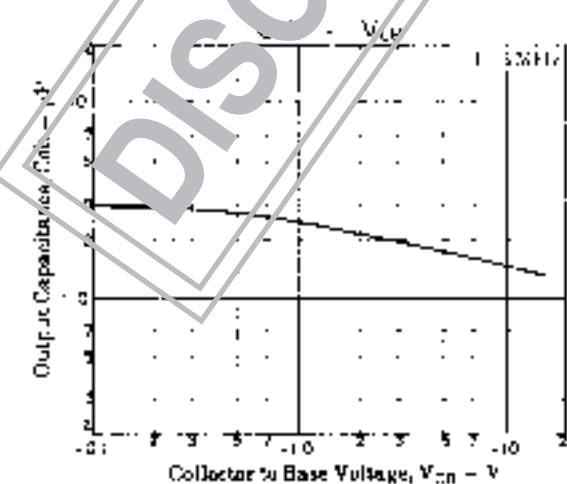
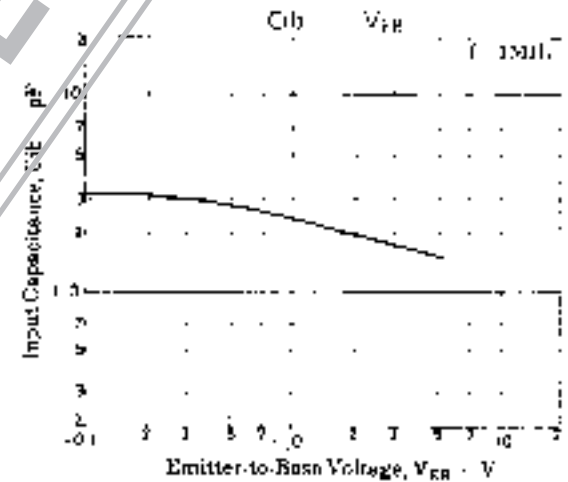
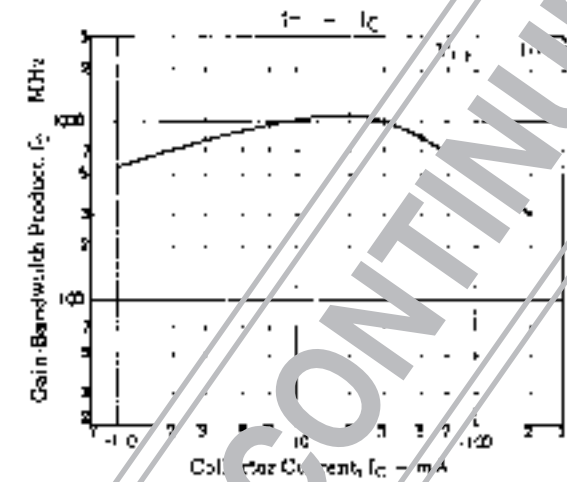
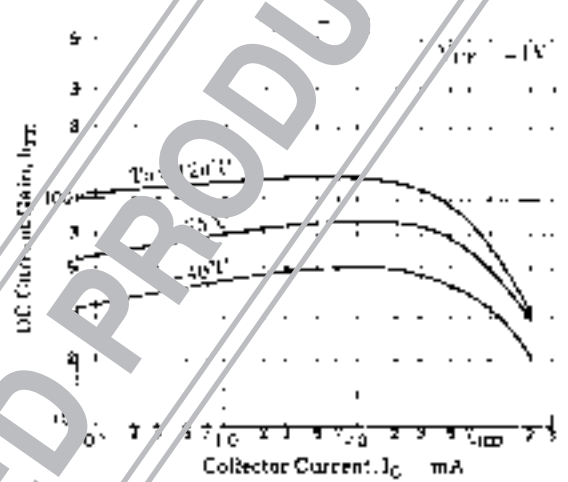
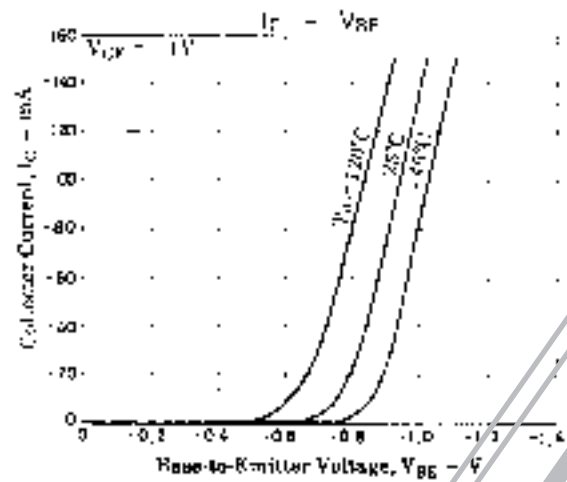
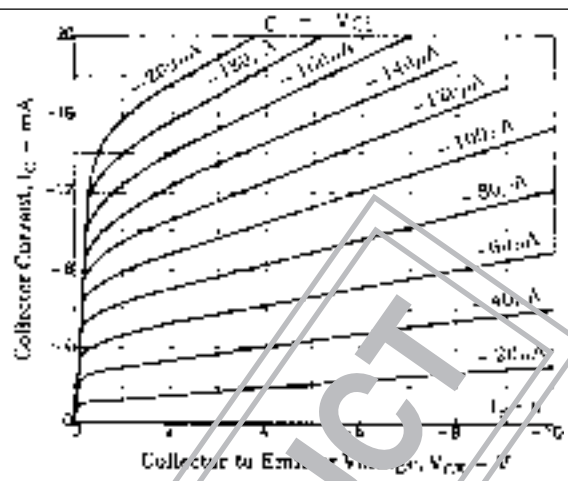
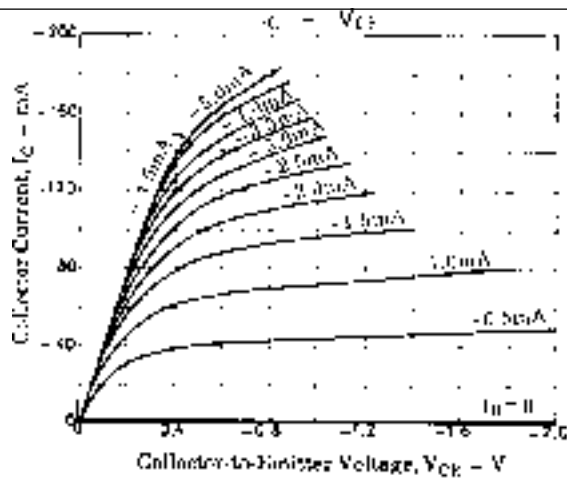


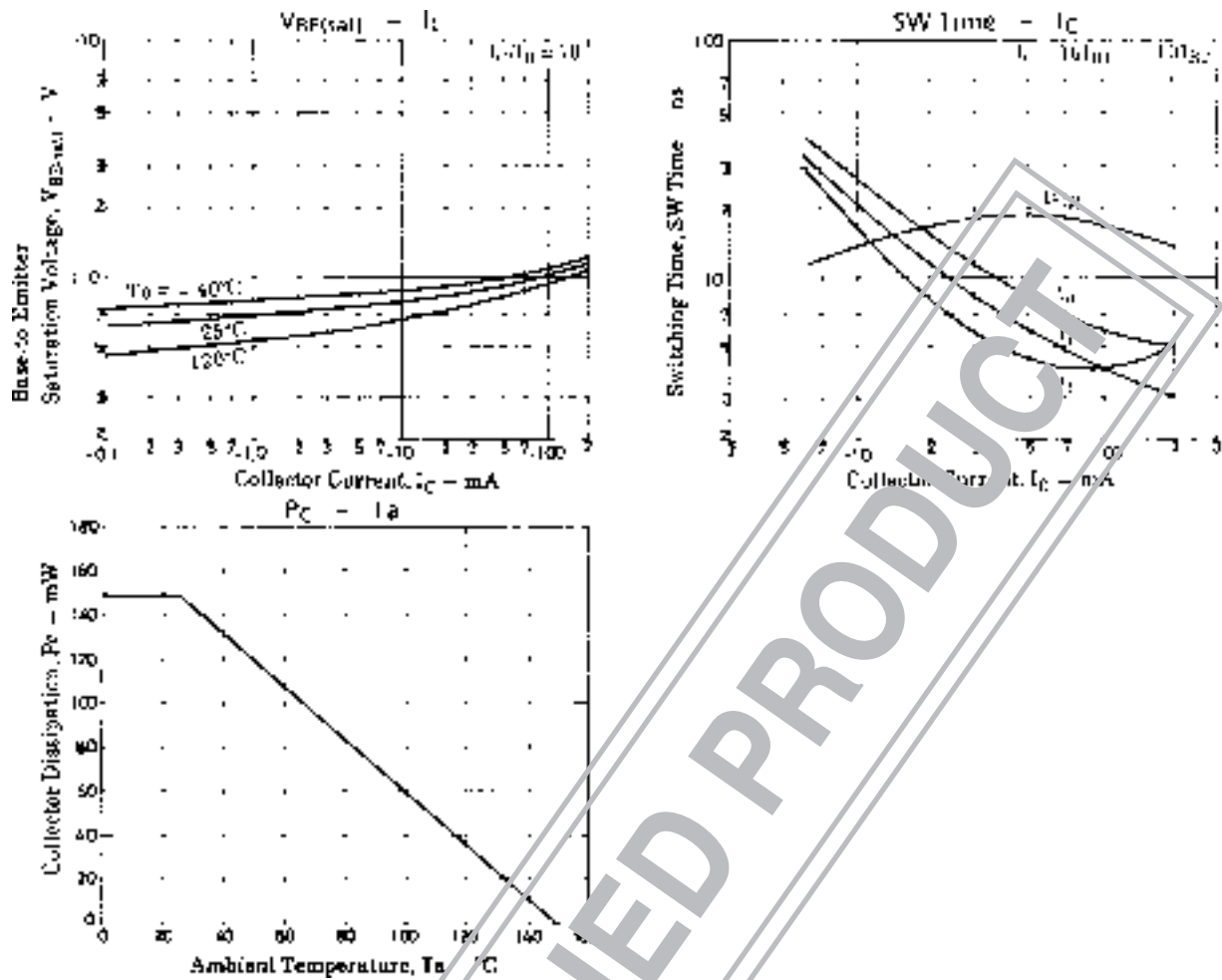
t_{stg} Test Circuit



t_{stg} Test Waveform







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