

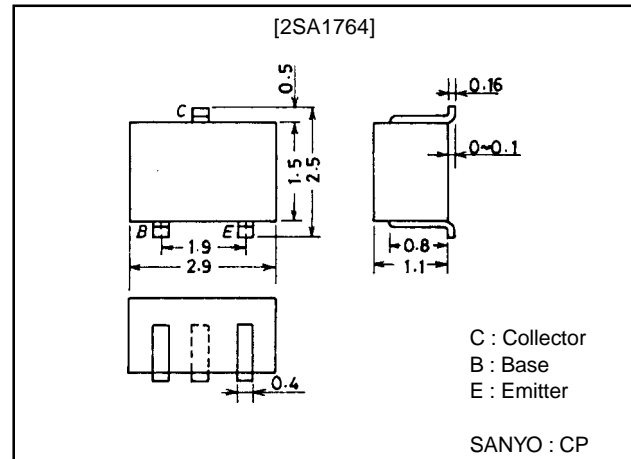
**2SA1764****High-Speed Switching Applications****Features**

- Fast switching speed.
- Low collector saturation voltage.
- High gain-bandwidth product.
- Small collector capacitance.
- Small-sized package permitting the 2SA1764-applied sets to be made small and slim.
- Complementary pair with the 2SC4453.

Package Dimensions

unit:mm

2018A

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		-15	V
Collector-to-Emitter Voltage	V_{CEO}		-15	V
Emitter-to-Base Voltage	V_{EBO}		-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		200	mW
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB} = -8\text{V}, I_E = 0$			-0.1	μA
Emitter Cutoff Current	I_{EB0}	$V_{EB} = -3\text{V}, I_C = 0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	50	80	140	
Gain-Bandwidth Product	f_T	$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	450	1000		MHz
Output Capacitance	C_{ob}	$V_{CB} = -5\text{V}, f = 1\text{MHz}$		1.8	3.0	pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$		-0.07	-0.20	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -10\mu\text{A}, I_B = -1\text{mA}$		-0.80	-0.90	V

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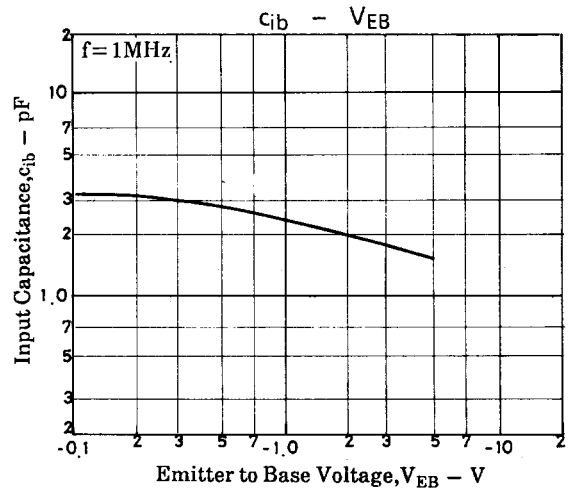
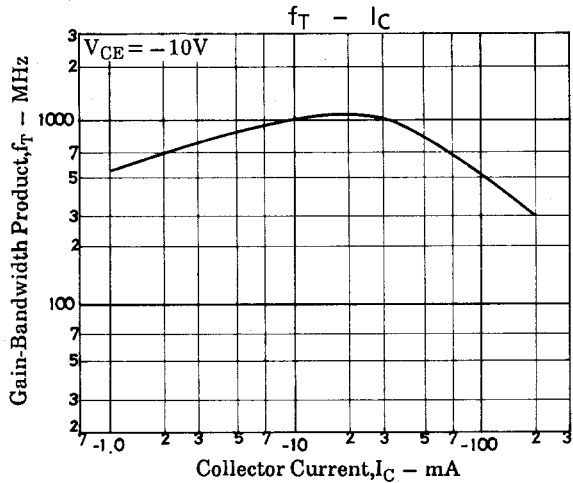
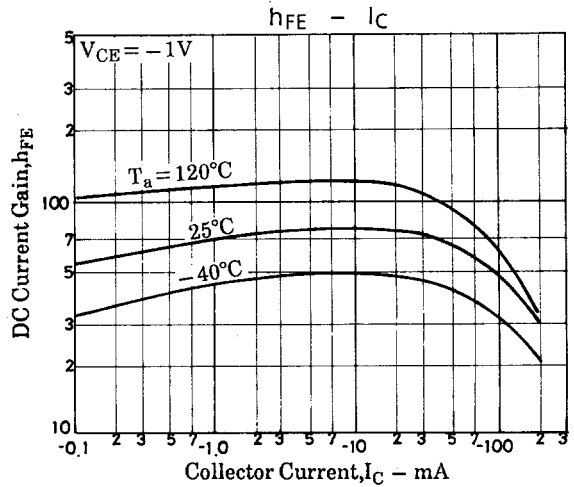
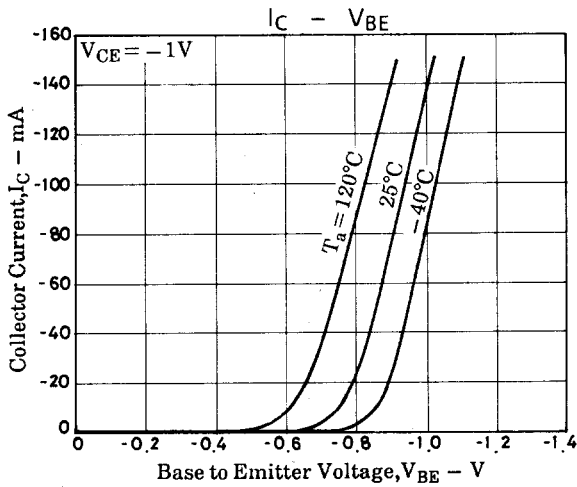
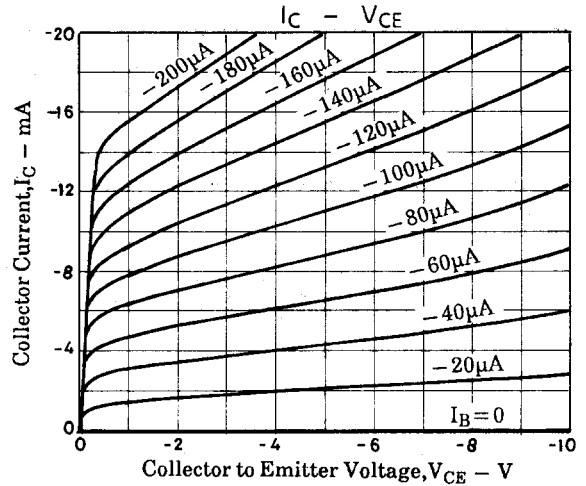
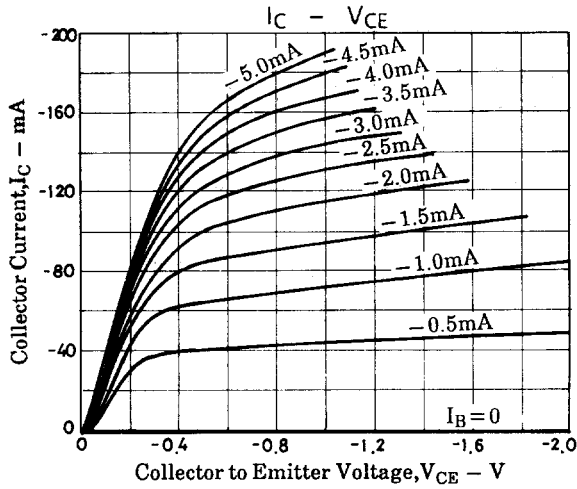
SANYO Electric Co., Ltd. Semiconductor Business Headquarters

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

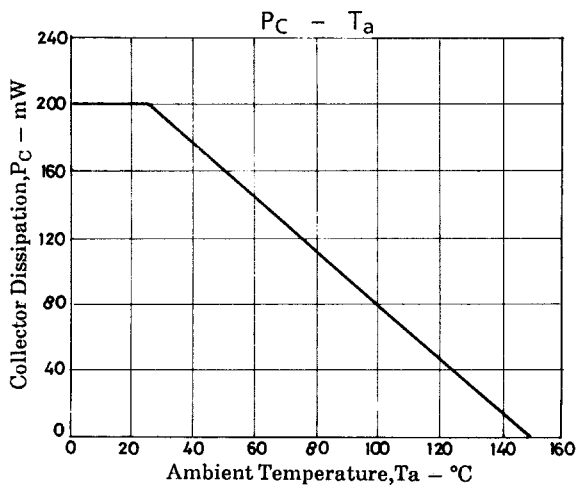
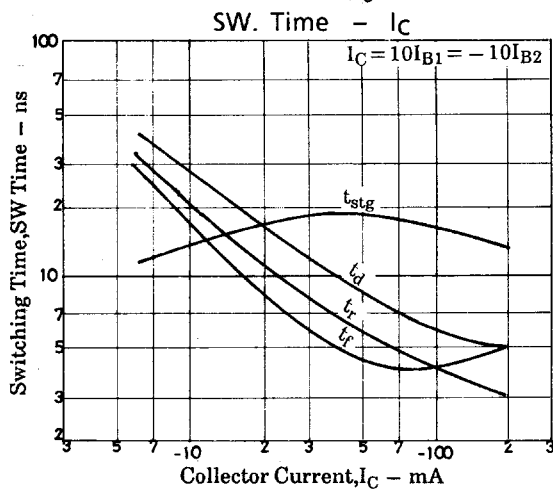
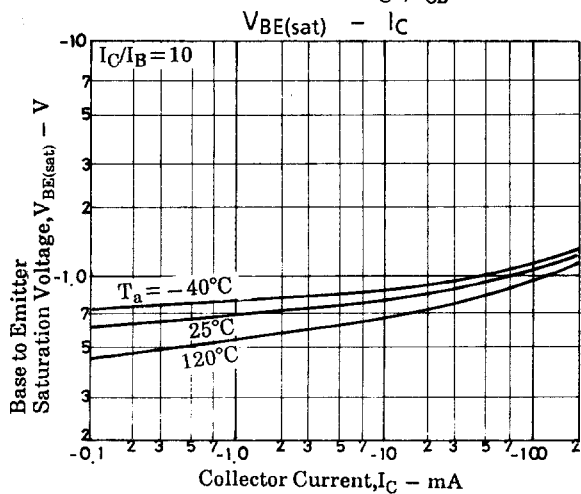
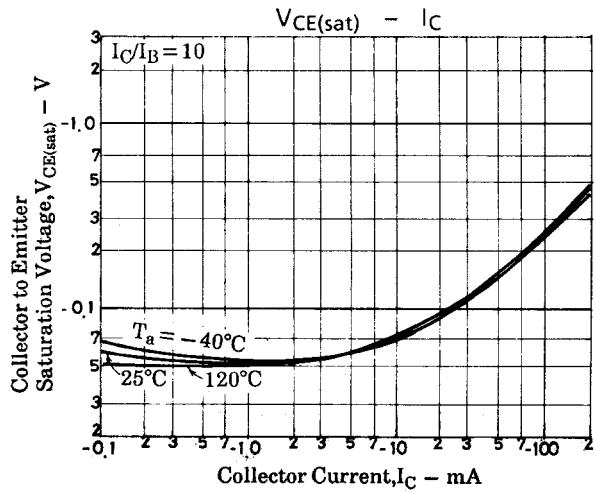
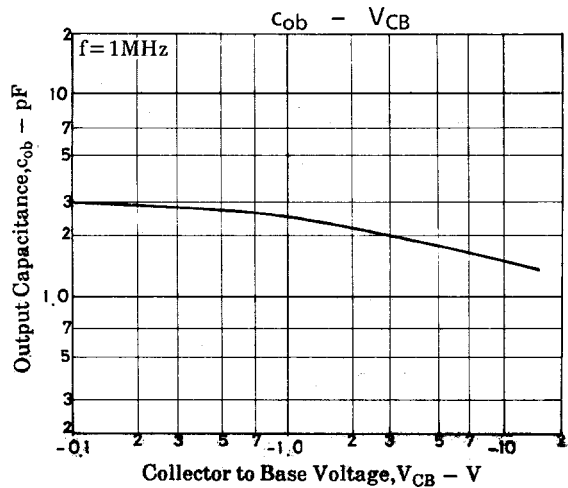
2SA1764

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

Marking : FS



2SA1764



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