

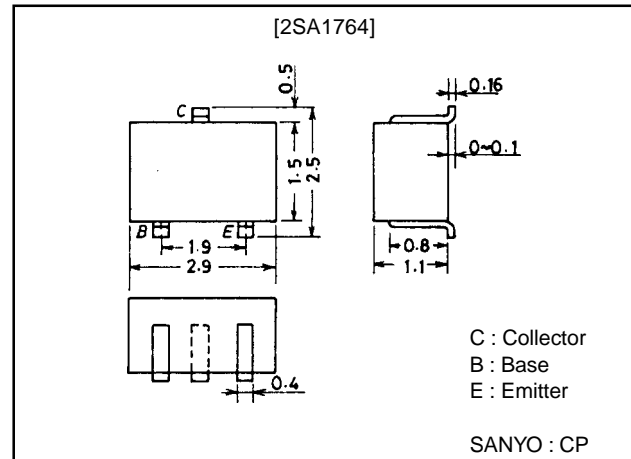
**2SA1764****High-Speed Switching Applications****Features**

- 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	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = -3\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
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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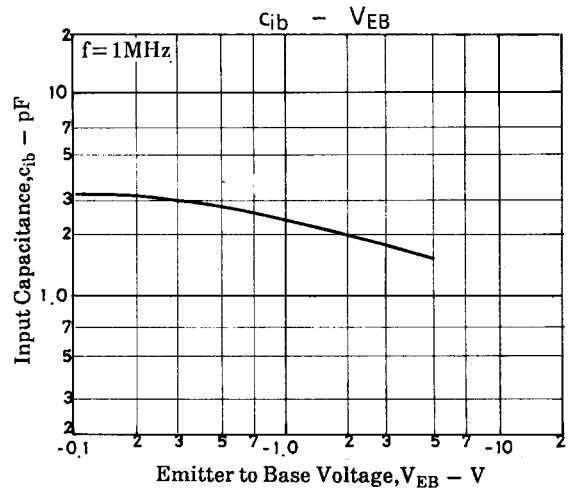
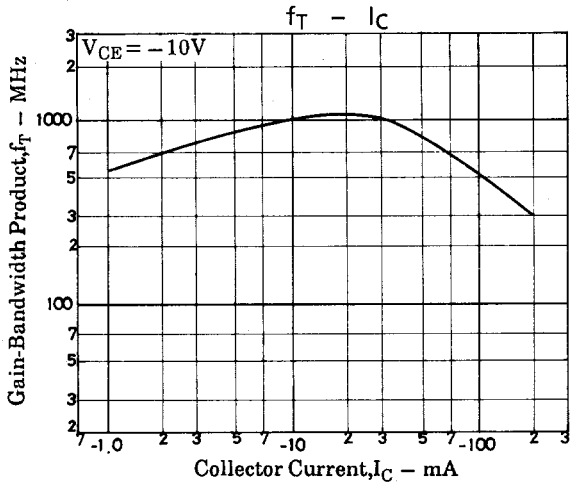
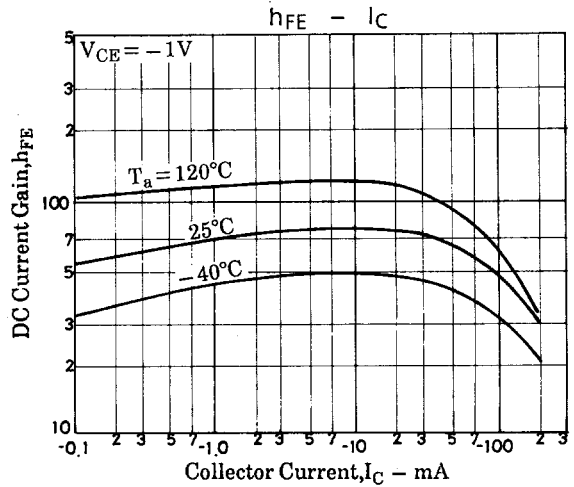
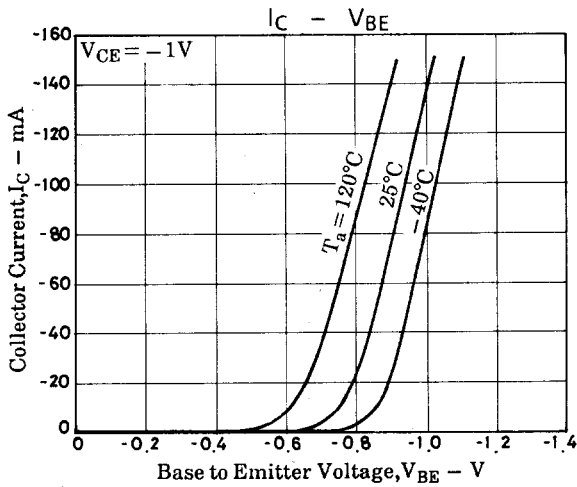
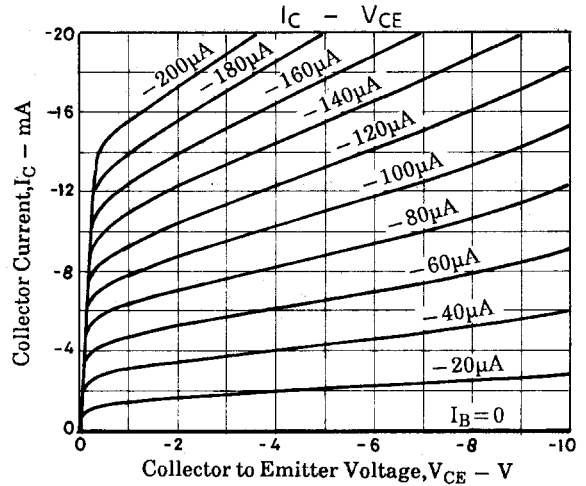
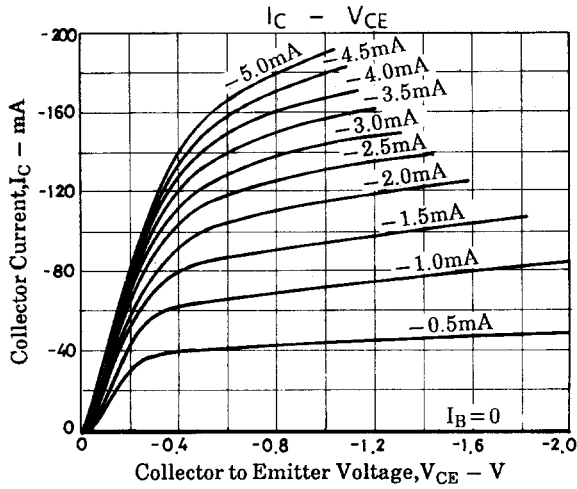
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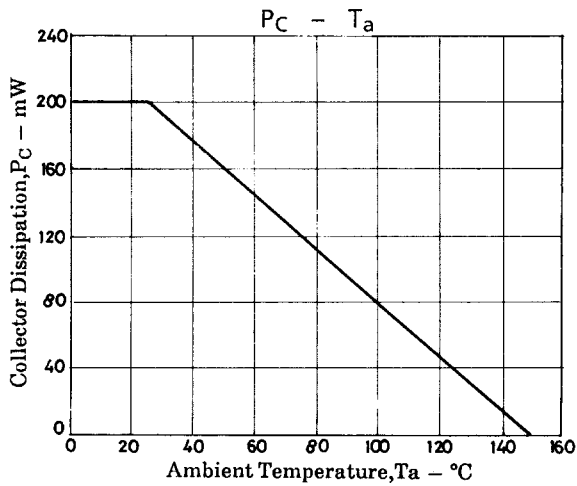
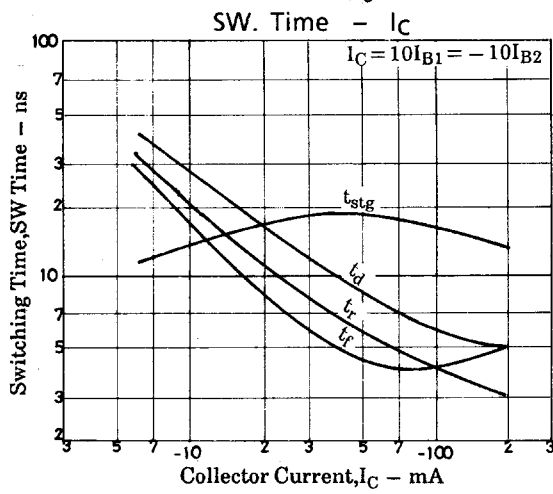
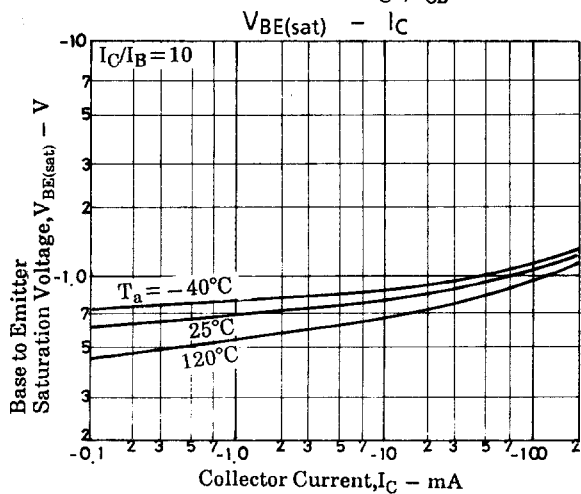
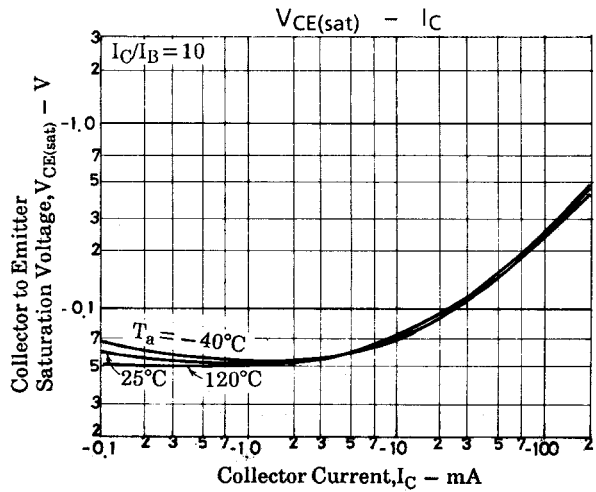
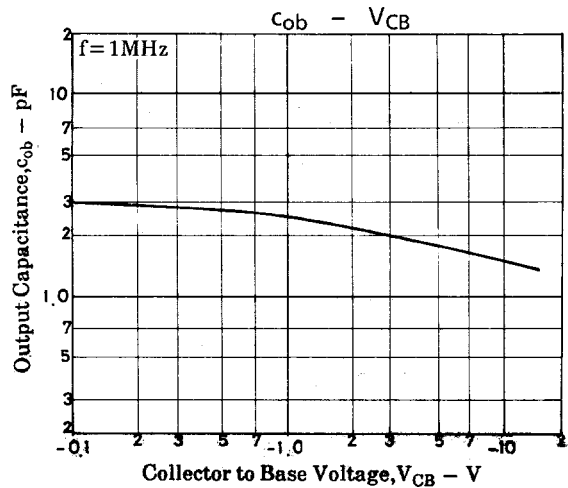
# 2SA1764

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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