

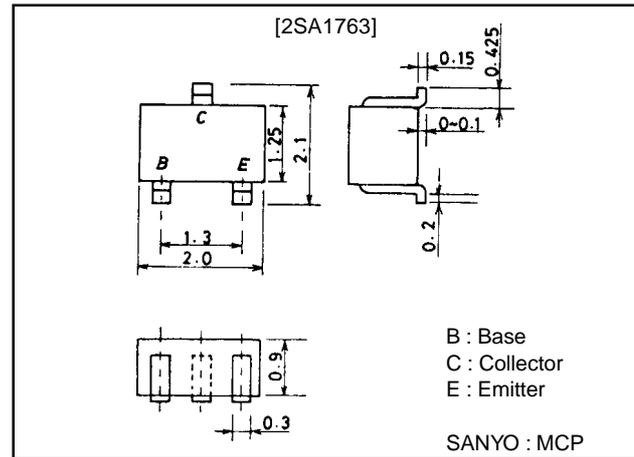
**2SA1763****High-Speed Switching Applications****Features**

- Fast switching speed.
- Low collector saturation voltage.
- High gain-bandwidth product.
- Small collector capacitance.
- Very small-sized package permitting the 2SA1763-applied sets to be made small and slim.
- Complementary pair with the 2SC4452.

Package Dimensions

unit:mm

2059

**Specifications****Absolute Maximum Ratings at Ta = 25°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_{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		150	mW
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}	$V_{CB}=-8V, I_E=0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-3V, I_C=0$			-0.1	μA
DC Current Gain	h_{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	-0.85	V

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■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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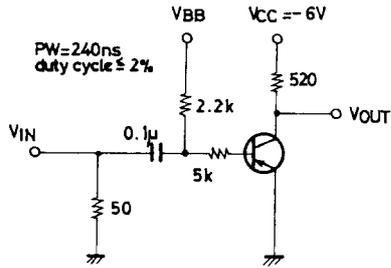
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-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

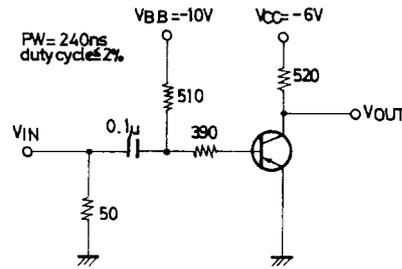
For the specified switching test circuit, see the below.

Switching Time Test Circuit

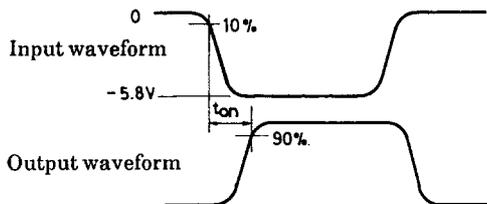
t_{on}, t_{off} Test Circuit



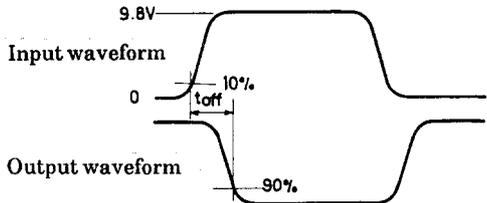
t_{stg} Test Circuit



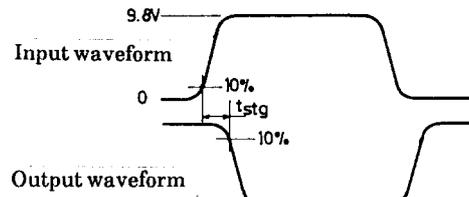
t_{on} Test Waveform ($V_{BB} = GND$)



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

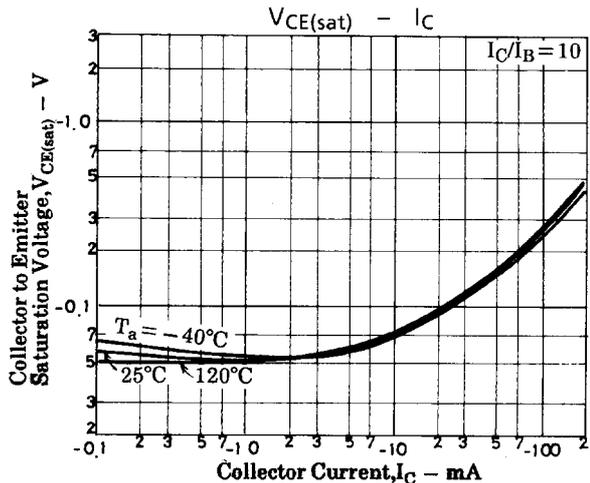
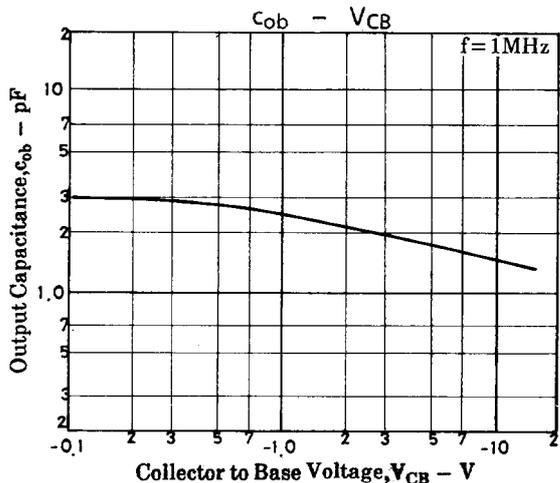
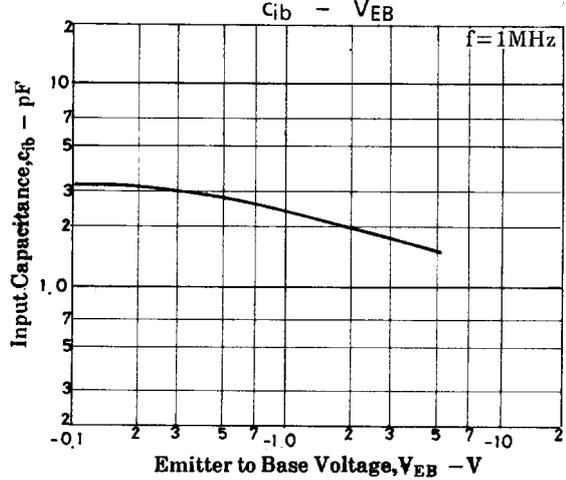
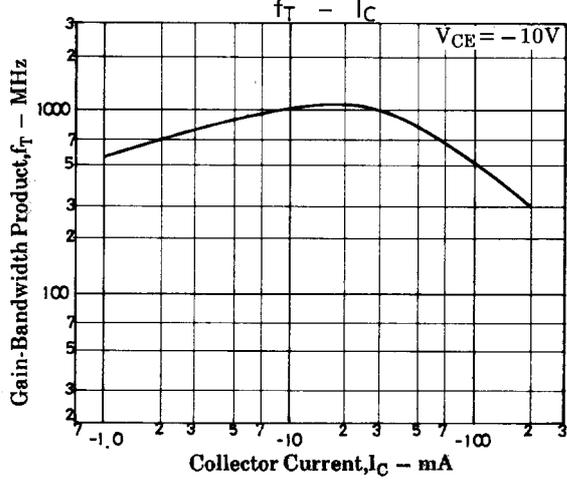
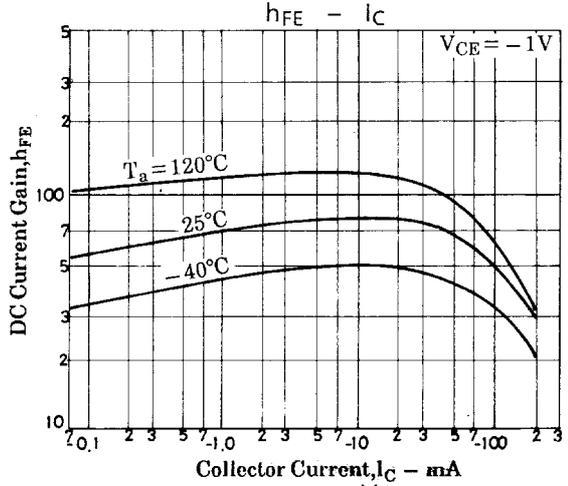
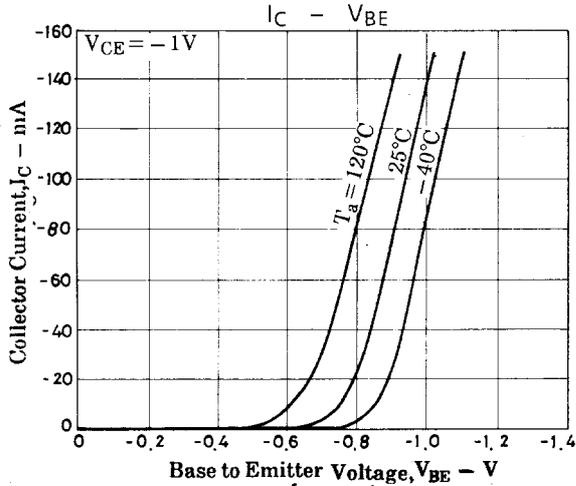
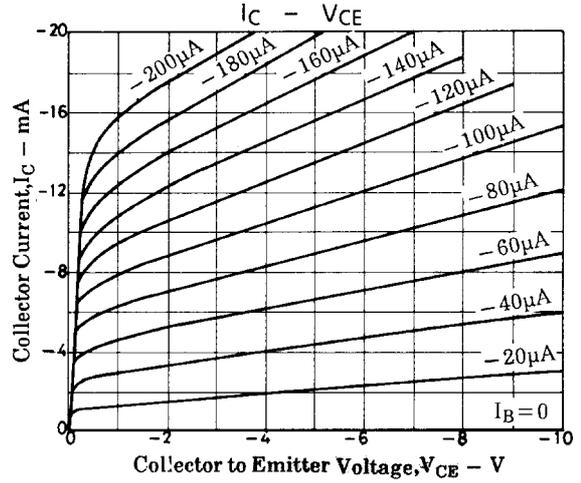
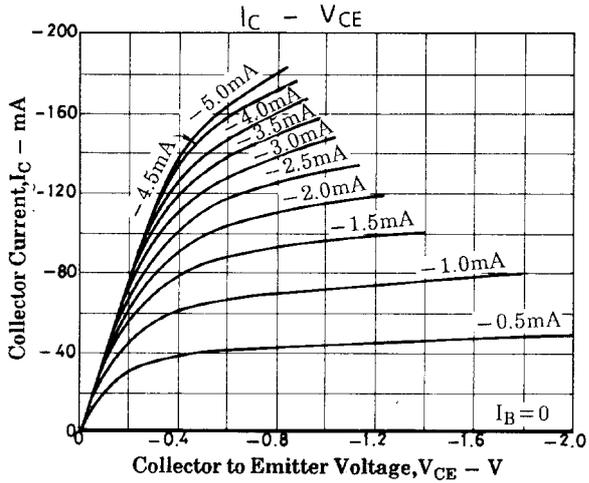


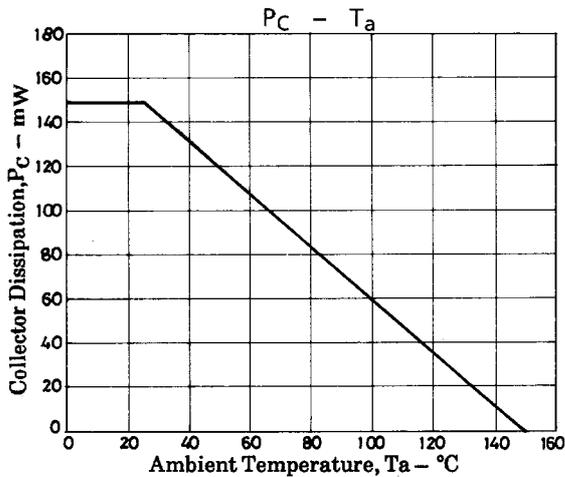
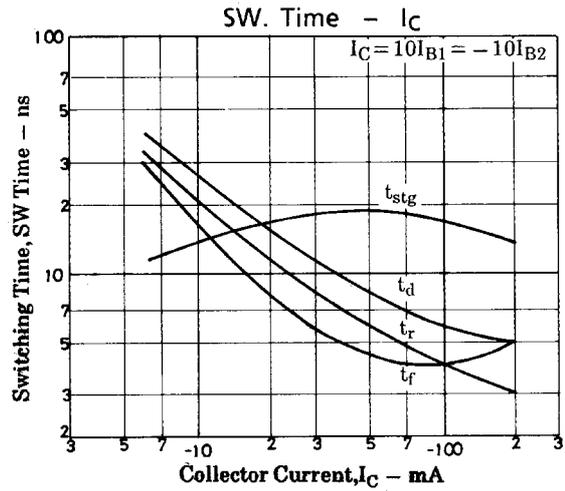
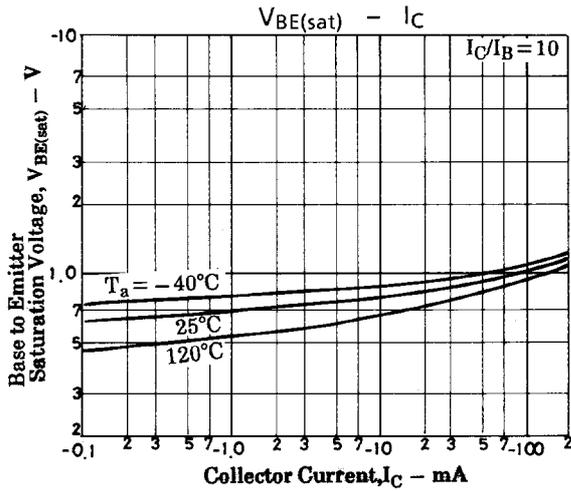
t_{stg} Test Waveform



Unit (resistance : Ω , capacitance : F)

2SA1763





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