



High-Speed Switching Applications

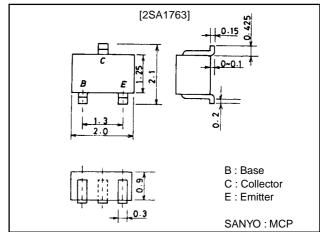
Features

- · 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	IC		-200	mA
Collector Current (Pulse)	I _{CP}		-500	mA
Base Current	I _B		-40	mA
Collector Dissipation	PC		150	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
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	hFE	V _{CE} =-1V, I _C =-10mA	50	80	140	
Gain-Bandwidth Product	fT	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

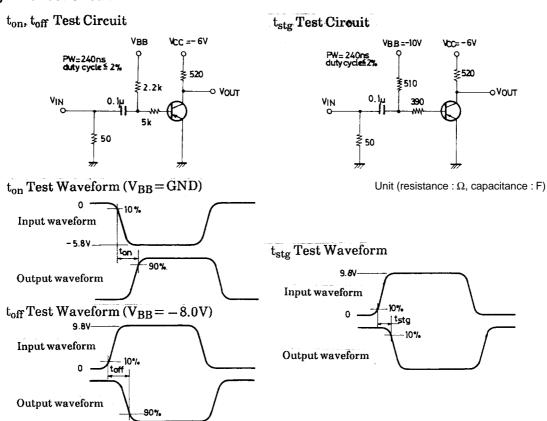
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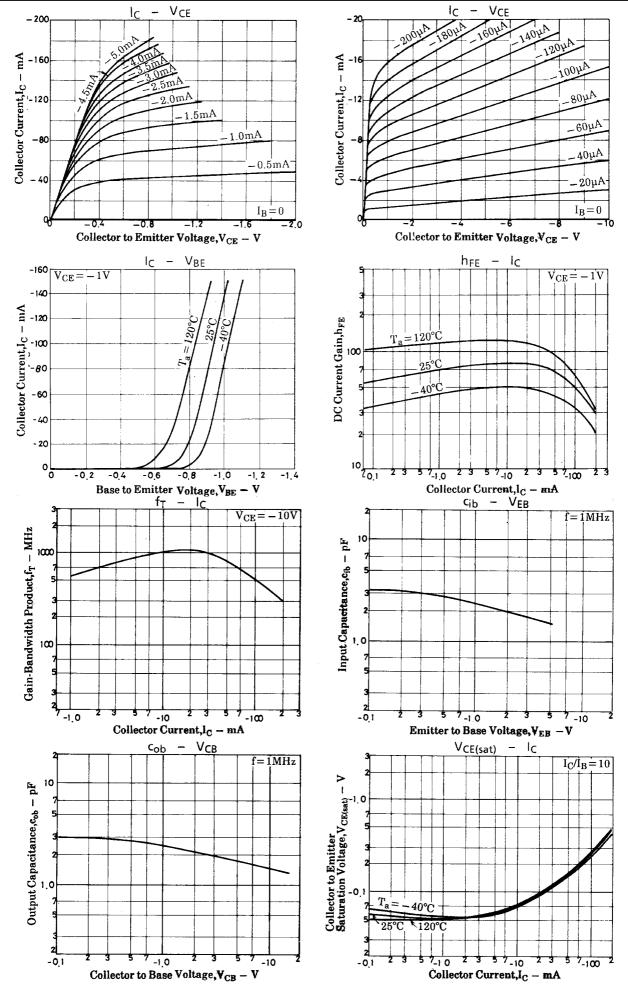
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =-10μA, I _E =0	-15			V
Collector-to-Emitter Breakdown Voltage	V _(BR) CEO	I _C =-1mA, R _{BE} =∞	-15			٧
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =-10μA, I _C =0	-5			V
Turn-ON Time	ton	See specified Test Circuit		11		ns
Storage Time	t _{stg}	See specified Test Circuit		21		ns
Turn-OFF Time	toff	See specified Test Circuit		19		ns

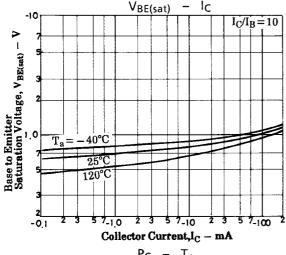
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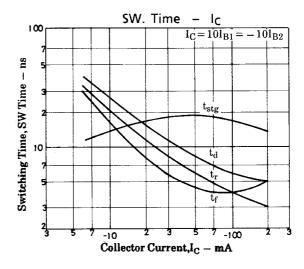
For the specified switching test circuit, see the below.

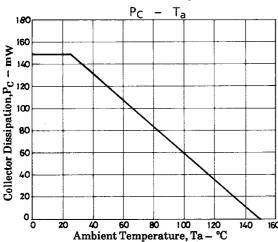
Switching Time Test Circuit











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