TOSHIBA Transistor Silicon PNP Epitaxial Type

2SA2065

High-Speed Switching Applications DC-DC Converter Applications Strobe Applications

- High DC current gain: $h_{FE} = 200$ to 500 ($I_{C} = -0.15$ A)
- Low collector-emitter saturation voltage: $V_{CE (sat)} = -0.14 \text{ V (max)}$
- High-speed switching: $t_f = 37 \text{ ns (typ.)}$

Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		V_{CBO}	-20	V	
Collector-emitter voltage		V_{CEO}	-20	V	
Emitter-base voltage		V _{EBO}	-7	V	
Collector current	DC	Ic	-1.5	Α	
	Pulse	I _{CP}	-2.5		
Base current		Ι _Β	-150	mA	
Collector power dissipation	t = 10 s	PC	750	mW	
	DC	(Note 1)	500		
Junction temperature		Tj	150	°C	
Storage temperature range		T _{stg}	−55 to 150	°C	

Note 1: Mounted on FR4 board (glass epoxy, 1.6 mm thick, Cu area: 645 mm²)

1. Base 2. Emitter 3. Collector JEDEC — JEITA — TOSHIBA 2-3S1A

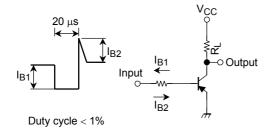
Weight: 0.01 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current		I _{CBO}	$V_{CB} = -20 \text{ V}, I_{E} = 0$	_	_	-100	nA
Emitter cut-off current		I _{EBO}	V _{EB} = -7 V, I _C = 0	_	_	-100	nA
Collector-emitter breakdown voltage		V (BR) CEO	I _C = −10 mA, I _B = 0	-20	_	_	V
DC current gain		h _{FE} (1)	V _{CE} = -2 V, I _C = -0.15 A	200	_	500	
		h _{FE} (2)	V _{CE} = -2 V, I _C = -0.5 A	125	_	_	
Collector-emitter saturation voltage		V _{CE} (sat)	I _C = -0.5 A, I _B = -17 mA	_	_	-0.14	V
Base-emitter saturation voltage		V _{BE (sat)}	I _C = -0.5 A, I _B = -17 mA	_	_	-1.10	V
Switching time	Rise time	t _r	See Figure 1 circuit diagram.	_	40	_	
	Storage time	t _{stg}	$V_{CC} \approx -10 \text{ V}, R_L = 20 \Omega$	_	135	_	ns
	Fall time	t _f	$-I_{B1} = I_{B2} = -17 \text{ mA}$	_	37	_	

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Marking



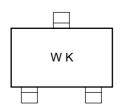
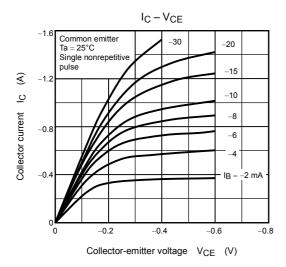
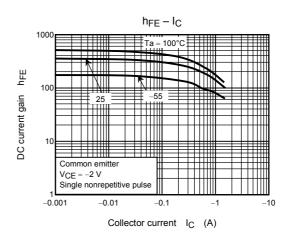
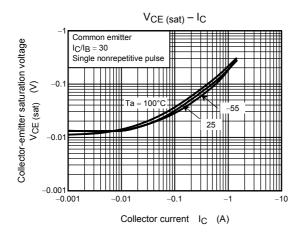
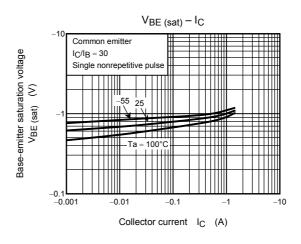


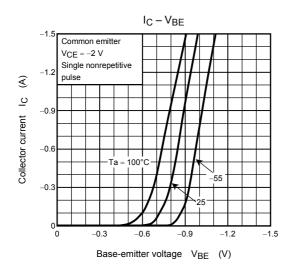
Figure 1 Switching Time Test Circuit & Timing Chart



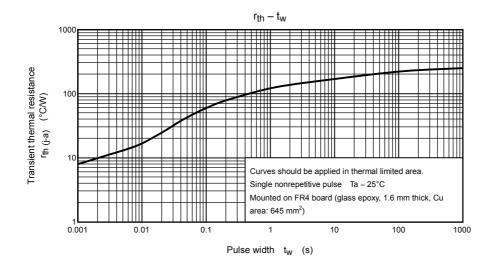


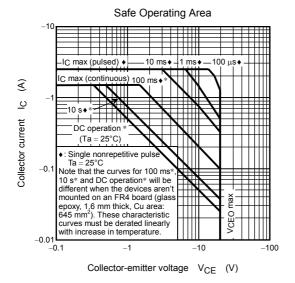






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