

TOSHIBA Transistor Silicon NPN Epitaxial Type

# 2SC5030

Strobe Flash Applications  
Medium Power Amplifier Applications

- High DC current gain:  $h_{FE(1)} = 800$  to  $3200$  ( $V_{CE} = 2\text{ V}$ ,  $I_C = 0.5\text{ A}$ )  
:  $h_{FE(2)} = 250$  (min) ( $V_{CE} = 2\text{ V}$ ,  $I_C = 4\text{ A}$ )
- Low saturation voltage:  $V_{CE(sat)} = 0.5\text{ V}$  (max)  
( $I_C = 4\text{ A}$ ,  $I_B = 40\text{ mA}$ )
- High collector power dissipation:  $P_C = 1.3\text{ W}$

### Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

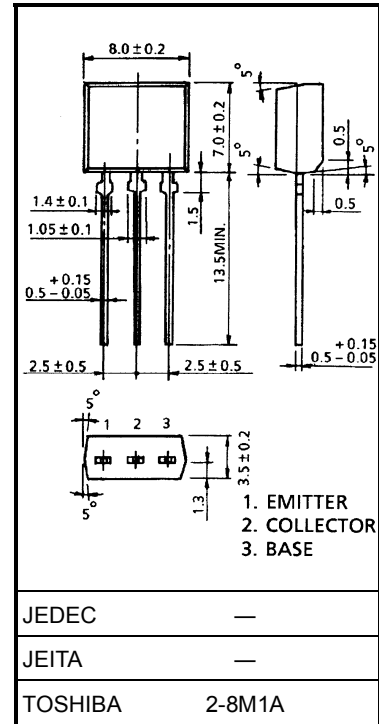
Characteristics	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	50	V
Collector-emitter voltage	$V_{CES}$	40	V
	$V_{CEO}$	20	
Emitter-base voltage	$V_{EBO}$	8	V
Collector current	DC	$I_C$	A
	Pulse (Note)	$I_{CP}$	
Base current	$I_B$	0.5	A
Collector power dissipation	$P_C$	1.3	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to 150	$^\circ\text{C}$

Note: Conditions: Pulse width = 10 ms (max), duty cycle = 30% (max)

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

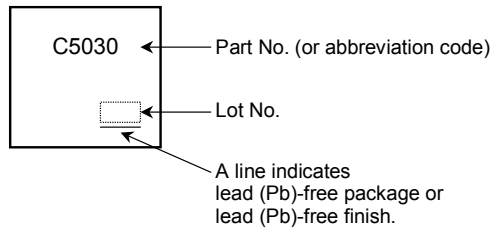
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 50\text{ V}$ , $I_E = 0$	—	—	100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 8\text{ V}$ , $I_C = 0$	—	—	100	nA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{ mA}$ , $I_B = 0$	20	—	—	V
DC current gain	$h_{FE(1)}$	$V_{CE} = 2\text{ V}$ , $I_C = 0.5\text{ A}$	800	—	3200	
	$h_{FE(2)}$	$V_{CE} = 2\text{ V}$ , $I_C = 4\text{ A}$	250	—	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 4\text{ A}$ , $I_B = 40\text{ mA}$	—	—	0.5	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 2\text{ V}$ , $I_C = 4\text{ A}$	—	—	1.2	V
Transition frequency	$f_T$	$V_{CE} = 2\text{ V}$ , $I_C = 0.5\text{ A}$	—	150	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$	—	45	—	pF

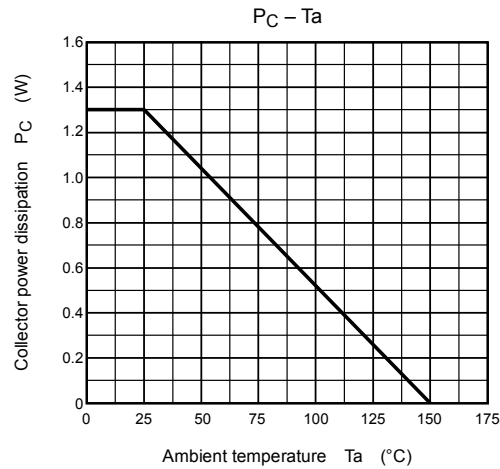
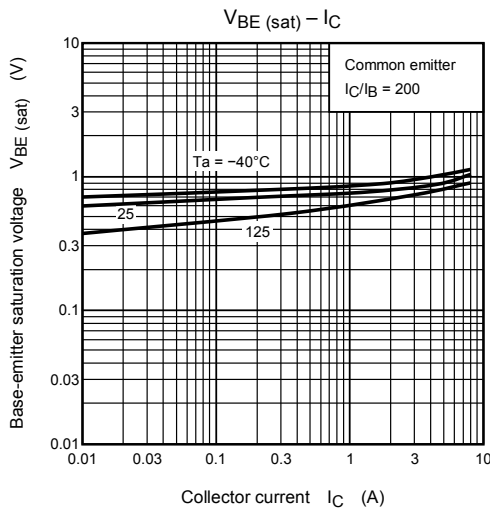
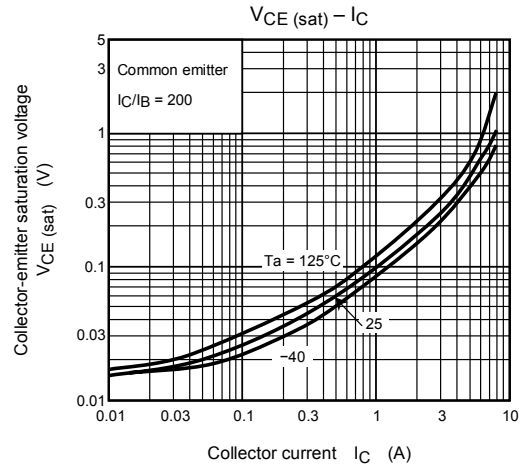
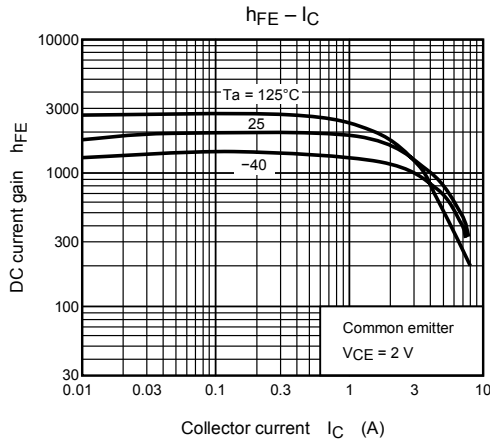
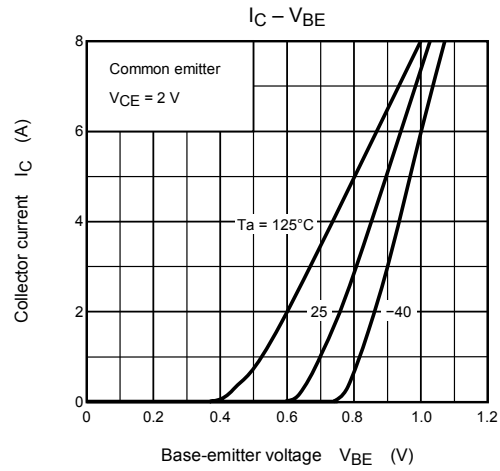
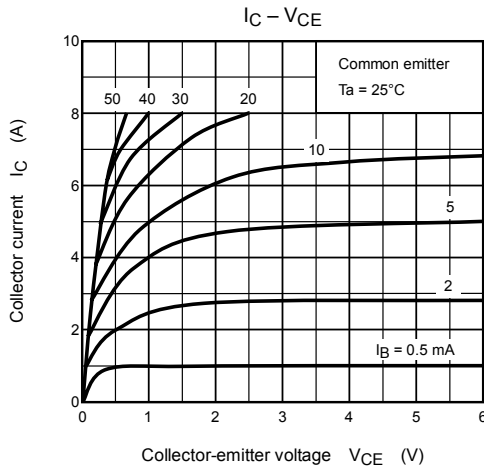
Unit: mm

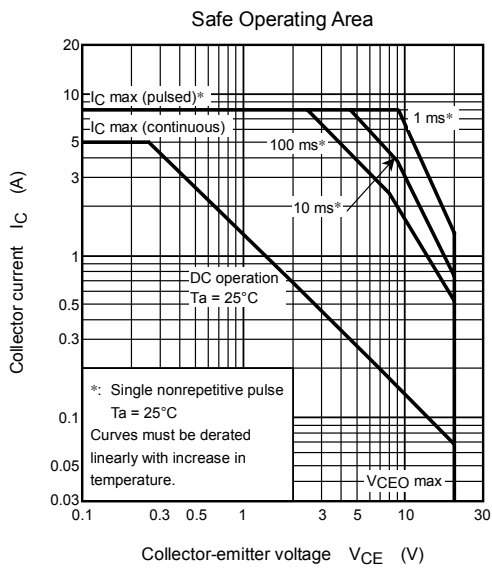
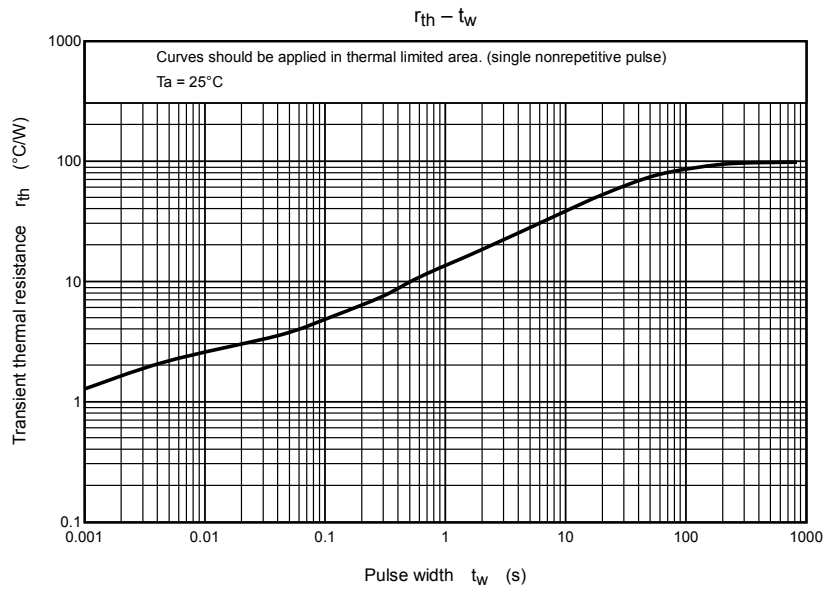


Weight: 0.55 g (typ.)

## Marking







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