

TOSHIBA Transistor Silicon NPN Epitaxial Type

2SC3474

Switching Applications
Solenoid Drive Applications

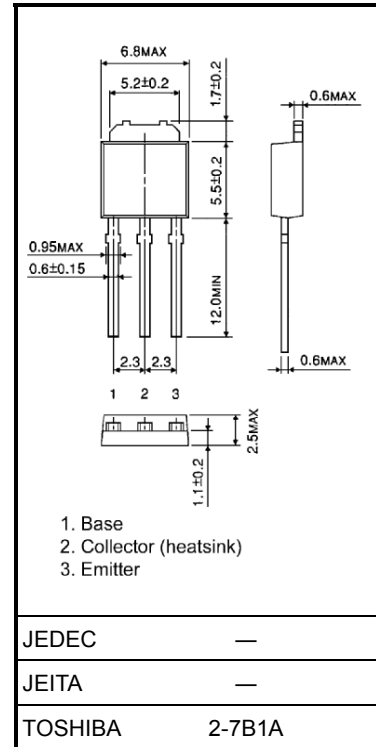
- High DC current gain: $h_{FE} = 500$ (min) ($I_C = 400$ mA)
- Low saturation voltage: $V_{CE(sat)} = 0.5$ V (max) ($I_C = 300$ mA)

Maximum Ratings (Ta = 25°C)

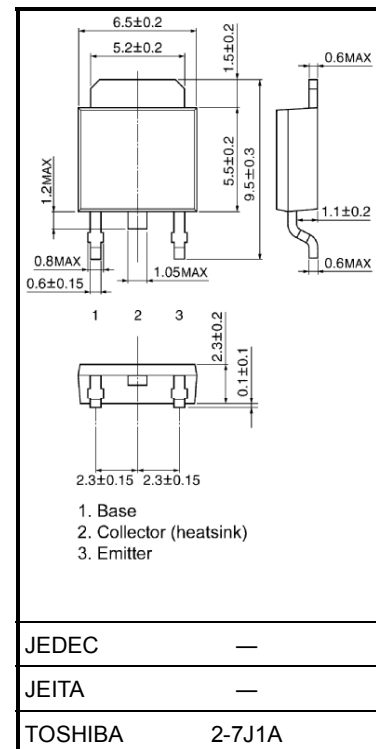
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	80	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	2	A
Base current	I_B	0.5	A
Collector power dissipation	Ta = 25°C	1.0	W
	Tc = 25°C	20	
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C

Industrial Applications

Unit: mm

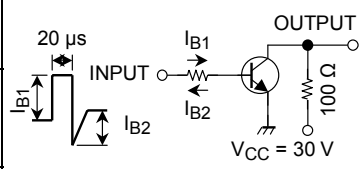


Weight: 0.36 g (typ.)

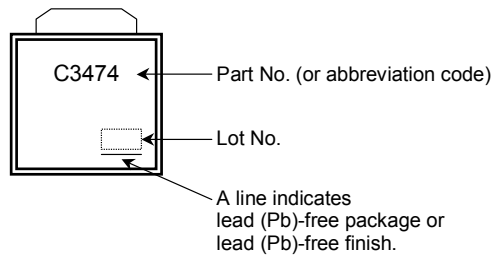


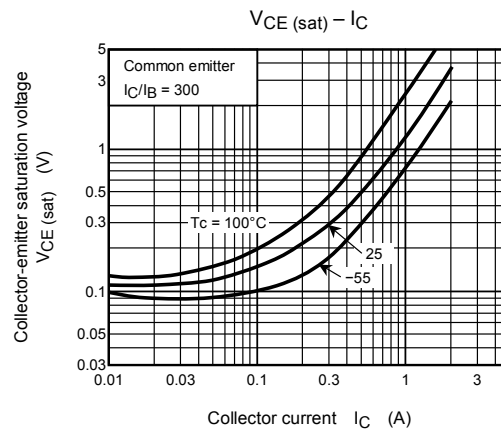
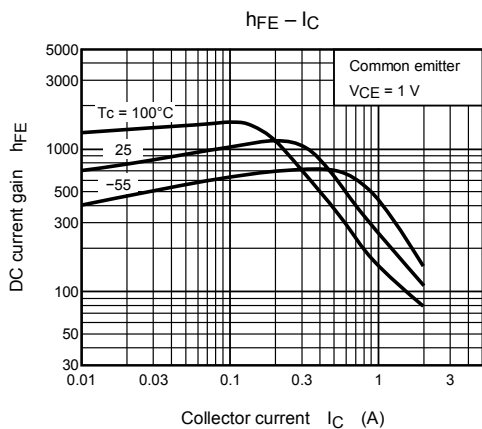
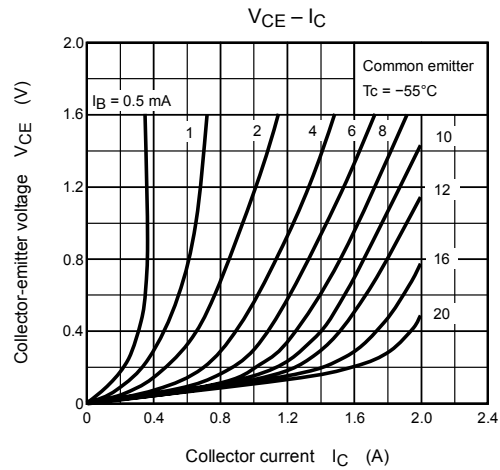
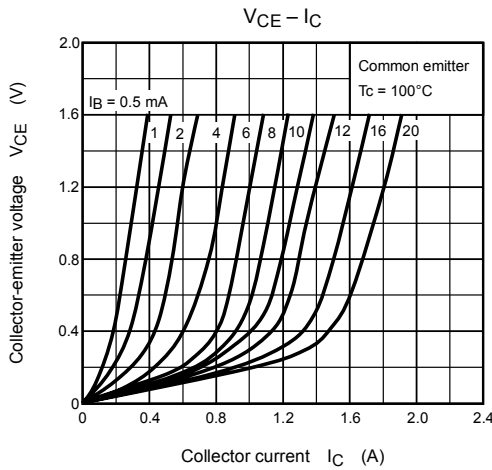
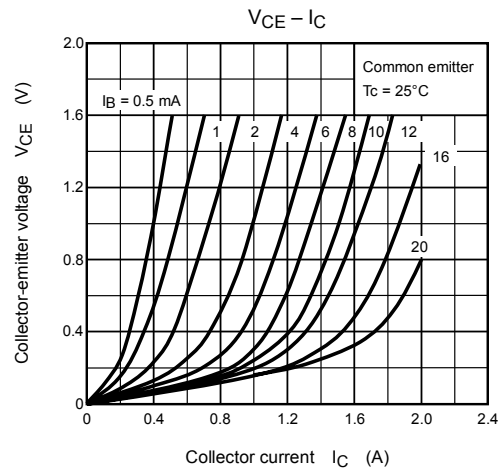
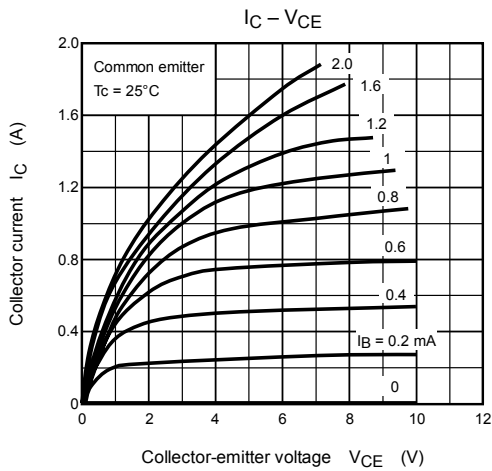
Weight: 0.36 g (typ.)

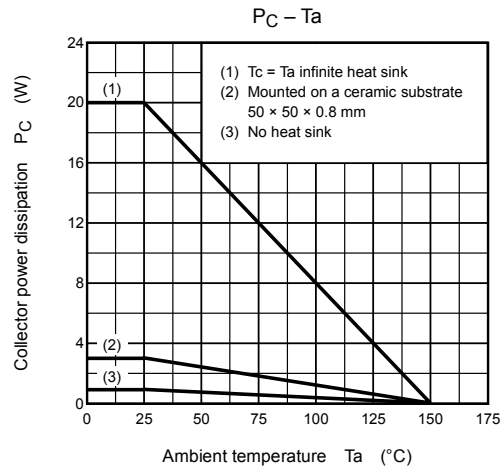
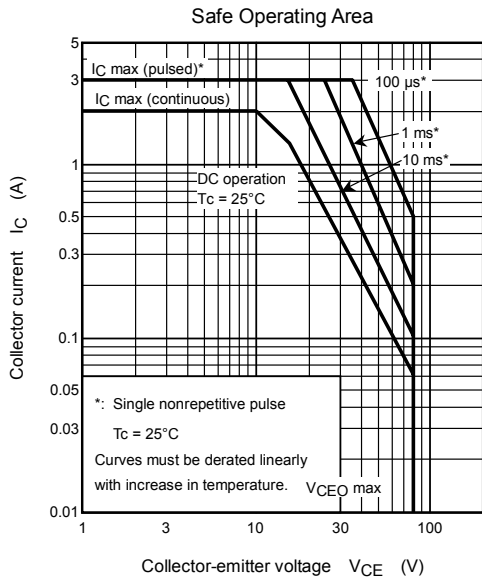
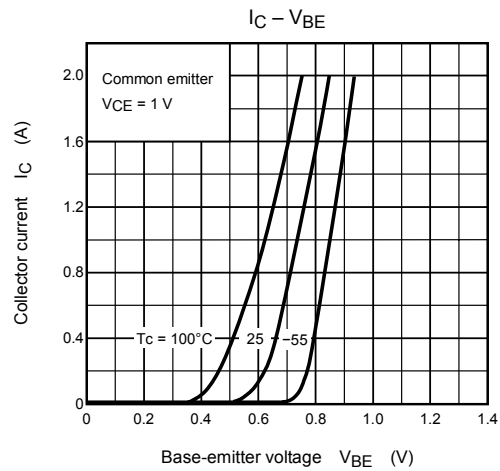
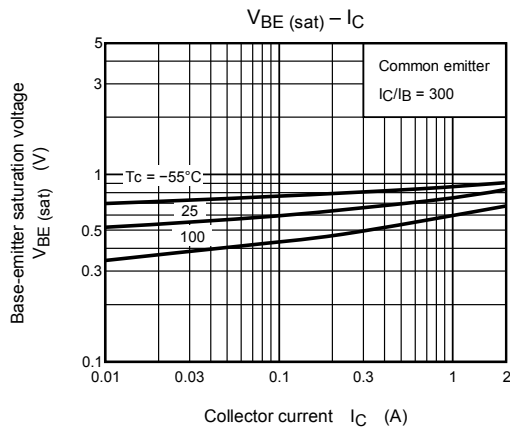
Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = 80 \text{ V}, I_E = 0$	—	—	1	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = 7 \text{ V}, I_C = 0$	—	—	1	μA
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C = 10 \text{ mA}, I_B = 0$	80	—	—	V
DC current gain		h_{FE}	$V_{CE} = 1 \text{ V}, I_C = 400 \text{ mA}$	500	—	—	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 300 \text{ mA}, I_B = 1 \text{ mA}$	—	0.3	0.5	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = 300 \text{ mA}, I_B = 1 \text{ mA}$	—	—	1.1	V
Transition frequency		f_T	$V_{CE} = 2 \text{ V}, I_C = 100 \text{ mA}$	—	85	—	MHz
Collector output capacitance		C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	50	—	pF
Switching time	Turn-on time	t_{on}		—	2	—	μs
	Storage time	t_{stg}		—	5	—	
	Fall time	t_f		$I_{B1} = -I_{B2} = 1 \text{ mA},$ $\text{DUTY CYCLE} \leq 1\%$	—	2	

Marking







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