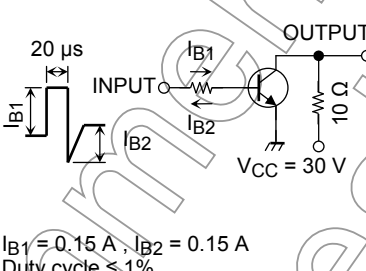
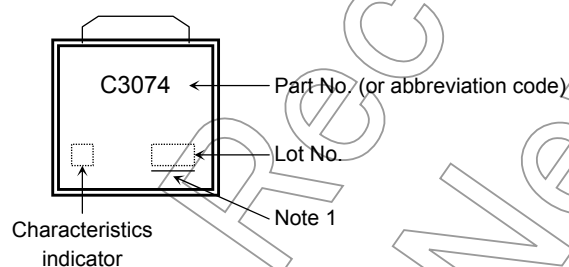


Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = 50 \text{ V}, I_E = 0$	—	—	1	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	1	μA
Collector-emitter breakdown voltage		$V_{(BR) CEO}$	$I_C = 10 \text{ mA}, I_B = 0$	50	—	—	V
DC current gain	$h_{FE} (1)$ (Note)		$V_{CE} = 1 \text{ V}, I_C = 1 \text{ A}$	70	—	240	
	$h_{FE} (2)$		$V_{CE} = 1 \text{ V}, I_C = 3 \text{ A}$	30	—	—	
Collector-emitter saturation voltage		$V_{CE (sat)}$	$I_C = 3 \text{ A}, I_B = 0.15 \text{ A}$	—	0.2	0.4	V
Base-emitter saturation voltage		$V_{BE (sat)}$	$I_C = 3 \text{ A}, I_B = 0.15 \text{ A}$	—	0.9	1.2	V
Transition frequency		f_T	$V_{CE} = 4 \text{ V}, I_C = 1 \text{ A}$	—	120	—	MHz
Collector output capacitance		C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	80	—	pF
Switching time	Turn-on time	t_{on}		—	0.1	—	μs
	Storage time	t_{stg}		—	1.0	—	
	Fall time	t_f		—	0.1	—	

Note: $h_{FE} (1)$ classification O: 70 to 140, Y: 120 to 240

Marking

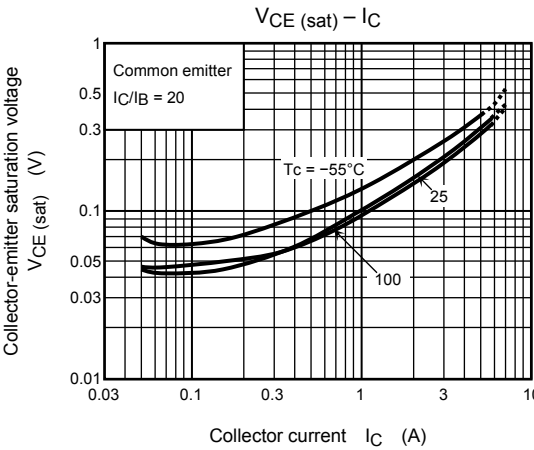
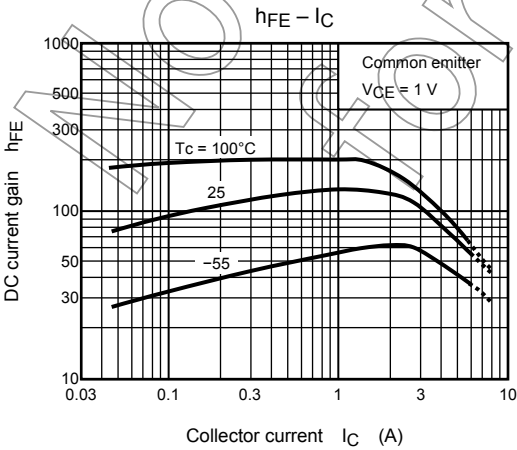
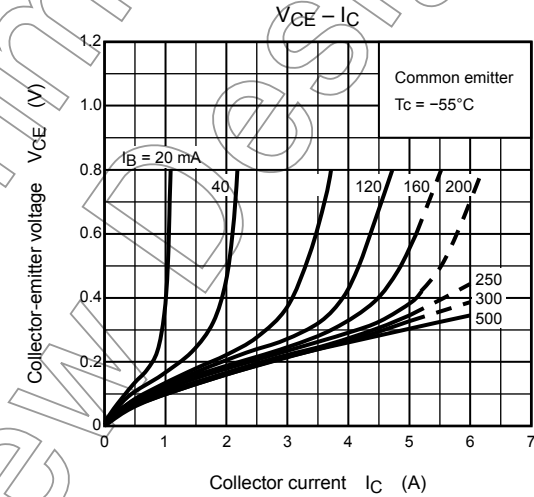
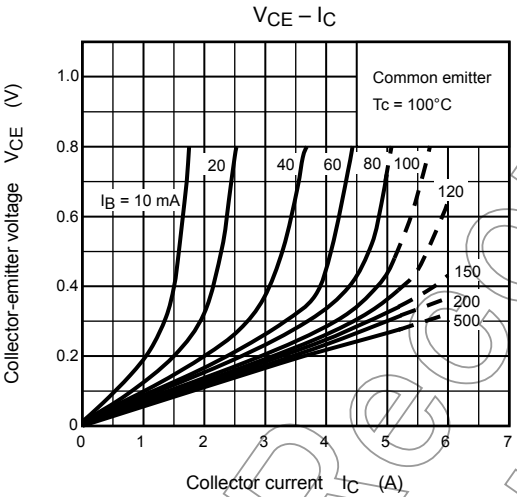
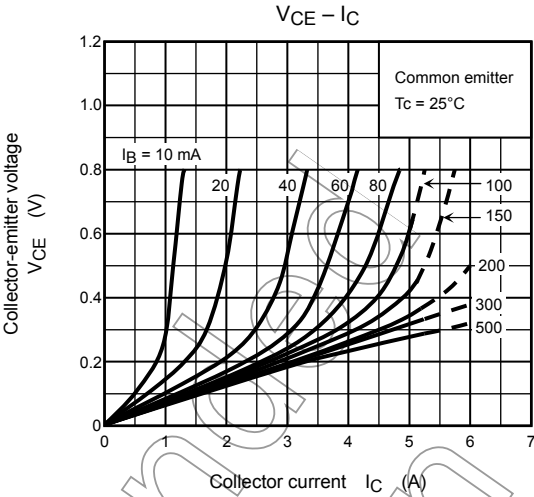
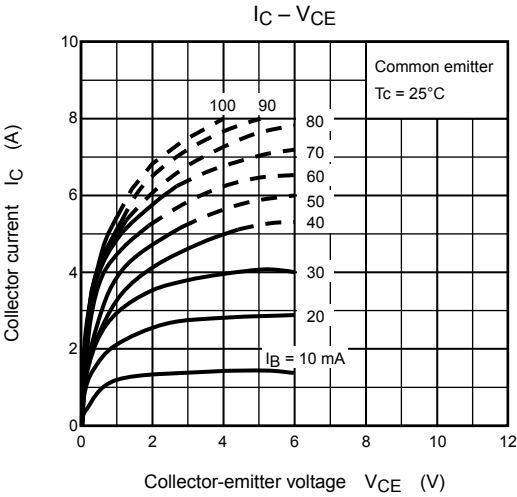


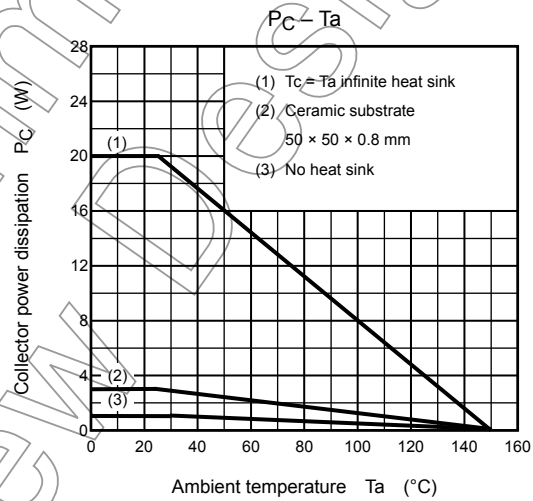
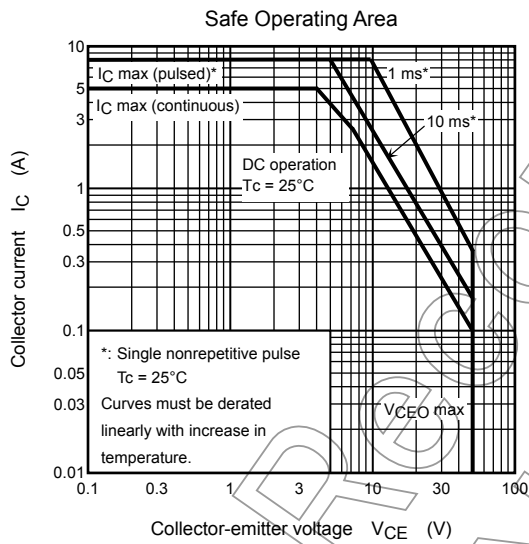
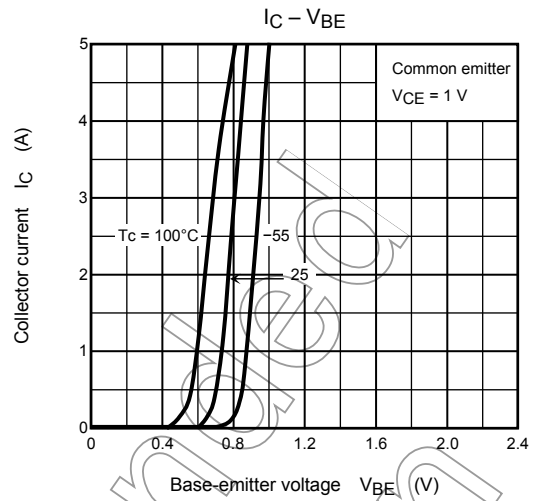
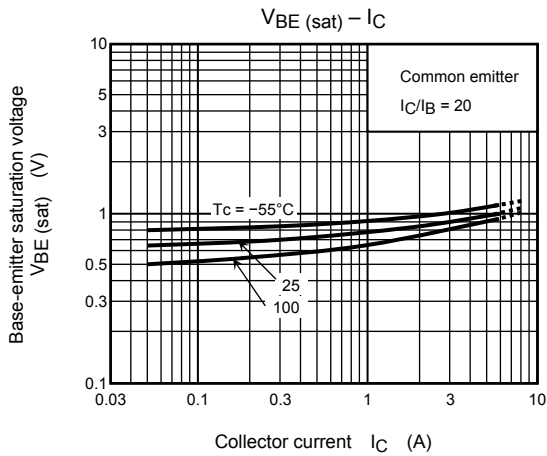
Note 1: A line under a Lot No. identifies the indication of product Labels.

Not underlined: [[Pb]]/INCLUDES > MCV

Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.





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