

Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = 100\text{ V}, I_E = 0$	—	—	100	nA
Emitter cut-off current		I_{EBO}	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	100	nA
Collector-emitter breakdown voltage		$V_{(BR)\text{ CEO}}$	$I_C = 10\text{ mA}, I_B = 0$	50	—	—	V
DC current gain		$h_{FE} (1)$	$V_{CE} = 2\text{ V}, I_C = 0.3\text{ A}$	400	—	1000	
		$h_{FE} (2)$	$V_{CE} = 2\text{ V}, I_C = 1\text{ A}$	200	—	—	
Collector-emitter saturation voltage		$V_{CE (sat)}$	$I_C = 1\text{ A}, I_B = 20\text{ mA}$	—	—	0.14	V
Base-emitter saturation voltage		$V_{BE (sat)}$	$I_C = 1\text{ A}, I_B = 20\text{ mA}$	—	—	1.10	V
Collector output capacitance		C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	13	—	pF
Switching time	Rise time	t_r	See Figure 1 circuit diagram. $V_{CC} \approx 30\text{ V}, R_L = 30\ \Omega$ $I_{B1} = -I_{B2} = 33.3\text{ mA}$	—	40	—	ns
	Storage time	t_{stg}		—	500	—	
	Fall time	t_f		—	120	—	

Marking

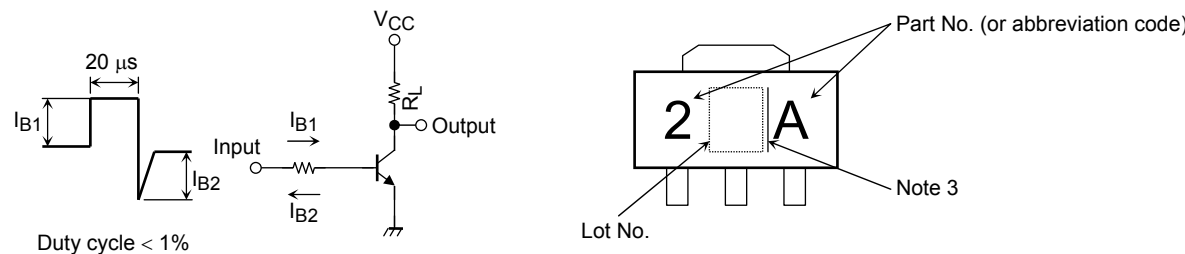


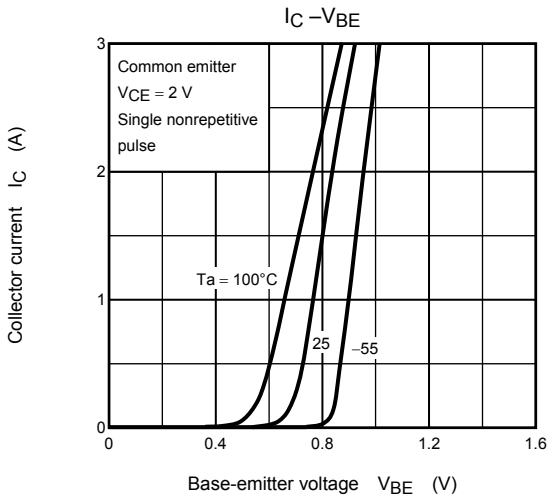
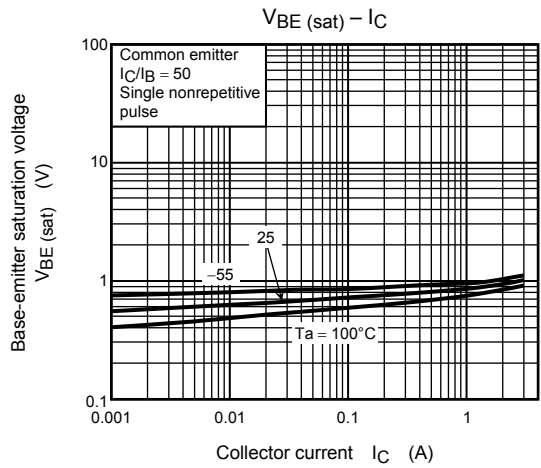
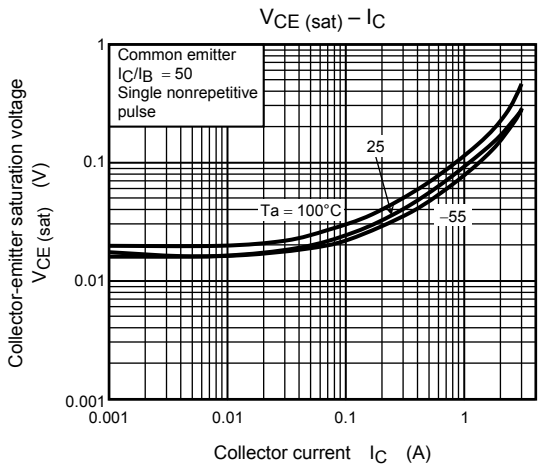
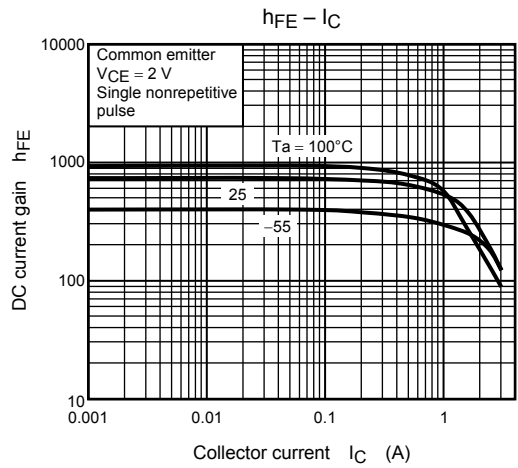
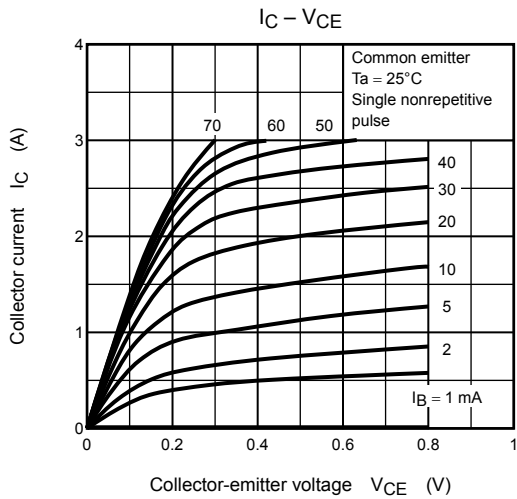
Figure 1 Switching Time Test Circuit & Timing Chart

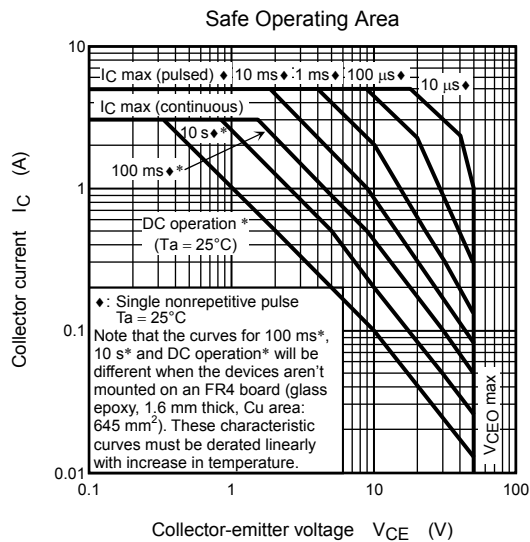
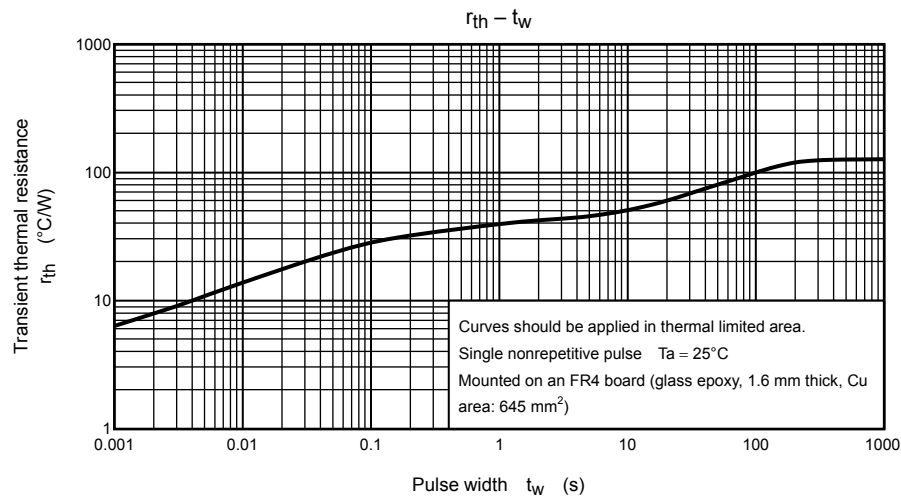
Note 3: A line beside a Lot No. identifies the indication of product Labels.

Without a line: [[Pb]]/INCLUDES > MCV

With a line: [[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 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.





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