

High-Current Switching Applications

- Low saturation voltage
- Large current capacity
- Fast switching speed

Electrical Characteristics at $T_A = 25^\circ\text{C}$	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 50\text{V}, I_E = 0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			100	nA
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 2\text{V}, I_C = 500\text{mA}$	140*		560*	
	$h_{FE}(2)$	$V_{CE} = 2\text{V}, I_C = 3\text{A}$	95			
Gain-Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$		150		MHz
Output Capacitance	c_{ob}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		45		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}, I_B = 60\text{mA}$		220	500	mV
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 3\text{A}, I_B = 60\text{mA}$			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	20			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	6			V
Turn-on Time	t_{on}	See specified Test Circuit.		30		ns
Storage Time	t_{stg}	"		300		ns
Fall Time	t_f	"		40		ns

mm)

6.9

4.5

1.0

1.0

0.9

0.6

0.5

E C B

1.45

2.5

1.0

1.0

4.0

0.45

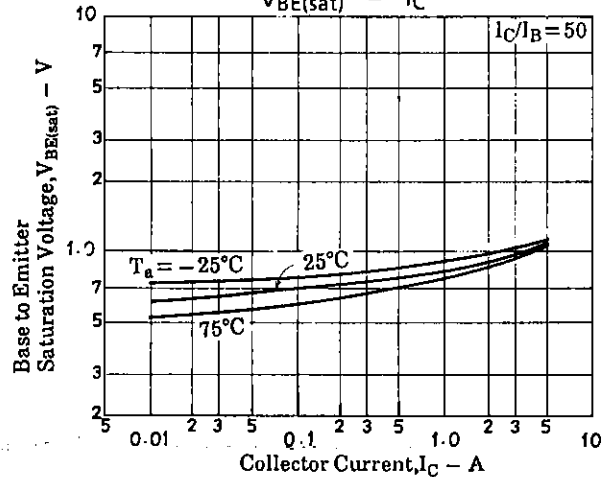
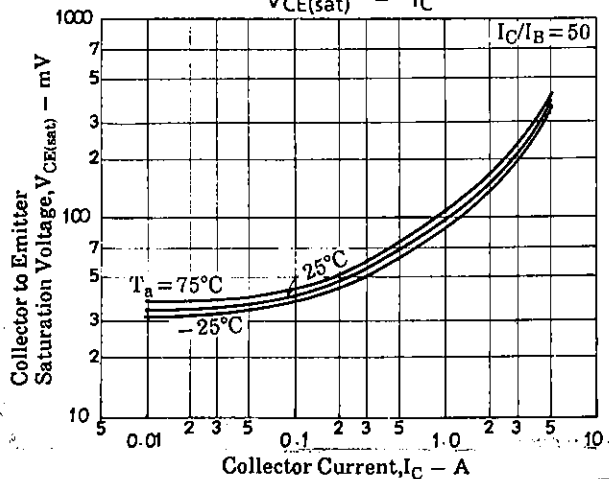
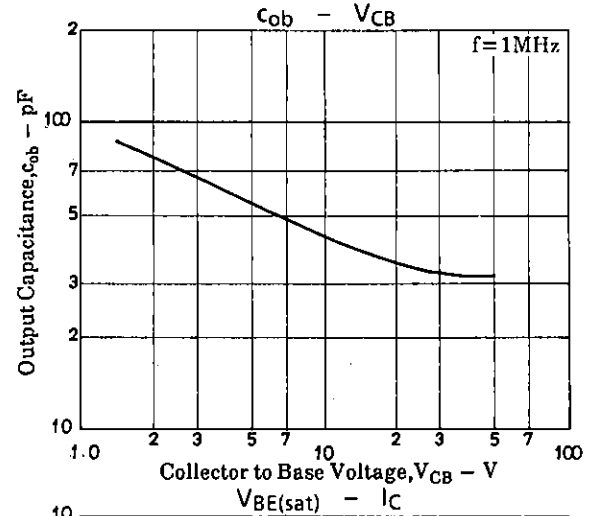
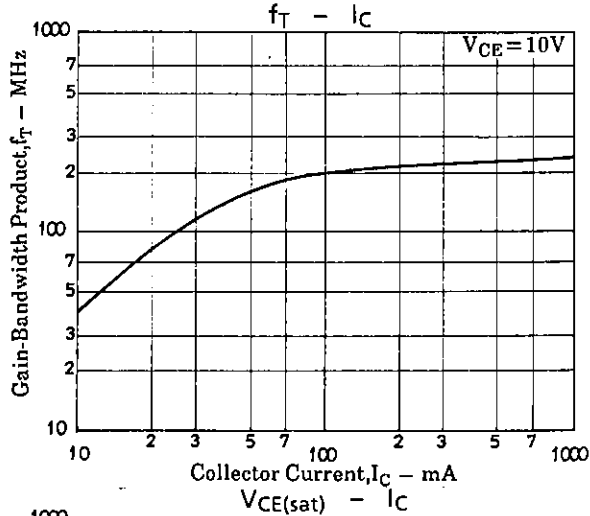
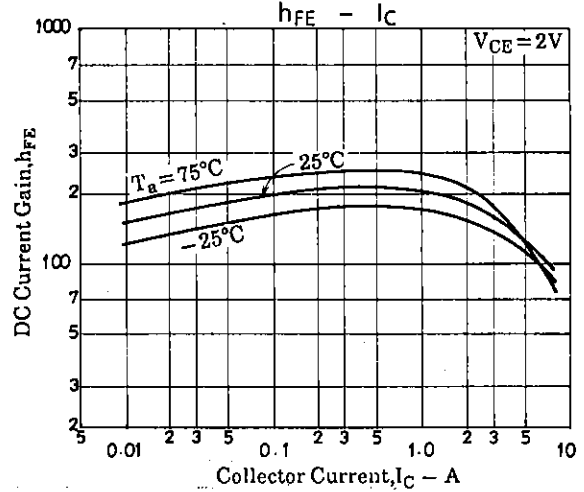
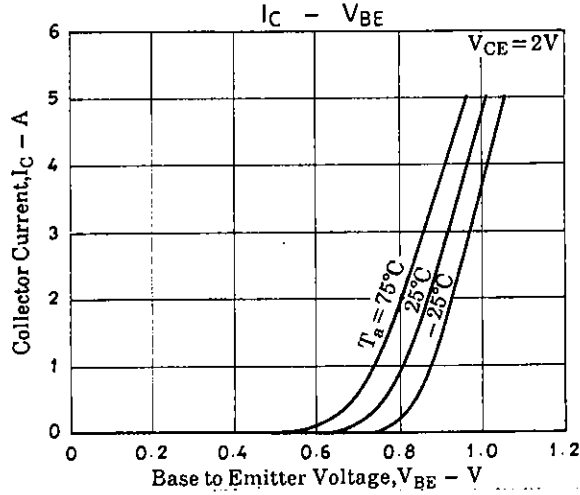
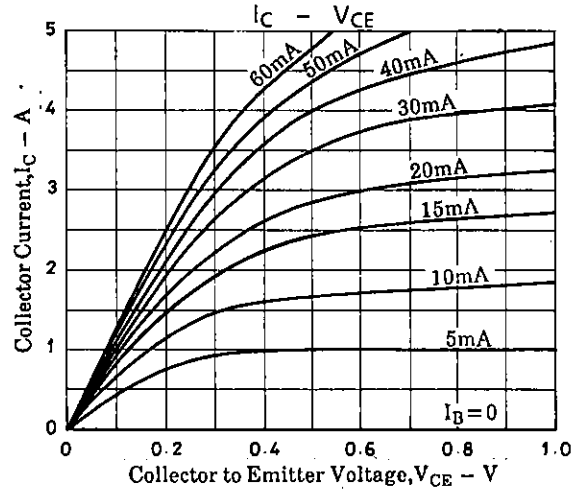
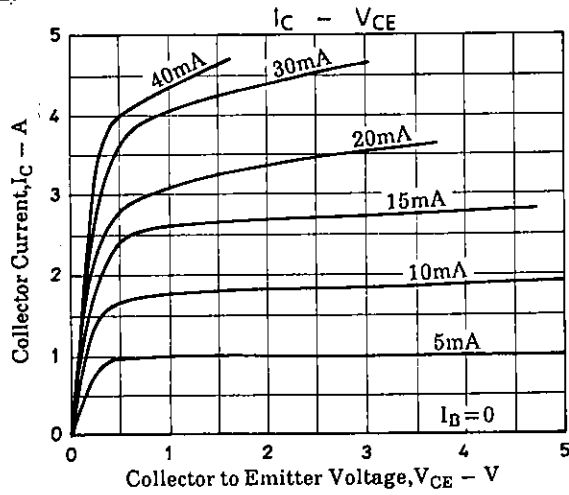
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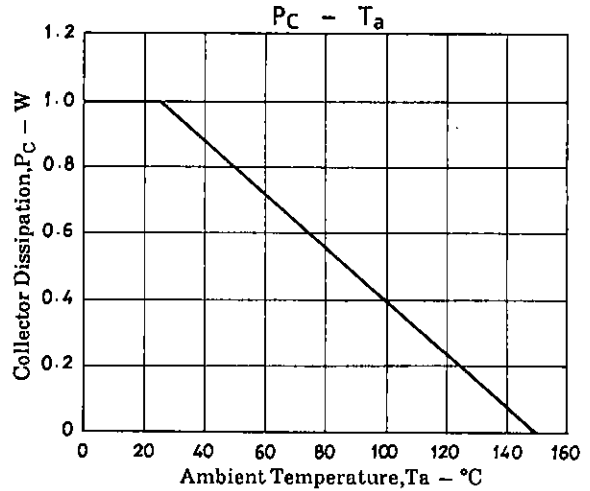
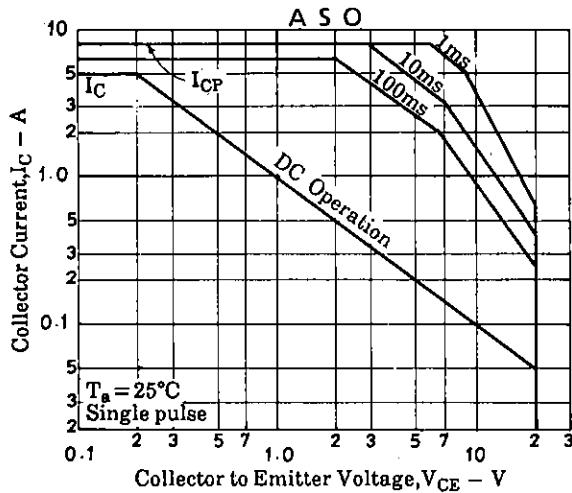
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E: Emitter
C: Collector
B: Base

SANYO: NMP

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