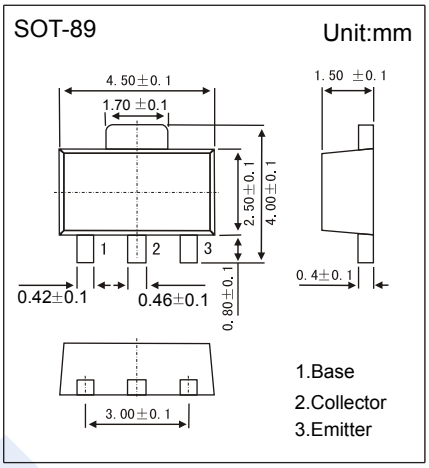
NPN Transistors

2SC5069



■ Features

- Collector Current Capability I_C=2A
- Collector Emitter Voltage V_{CEO}=25V

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	30	V
Collector - Emitter Voltage	V_{CEO}	25	
Emitter - Base Voltage	V_{EBO}	15	
Collector Current - Continuous	I_C	2	A
Collector Current - Pulse	I_{CP}	4	
Base Current	I_B	0.4	
Collector Power Dissipation (Note.1)	P_C	1.5	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1 : Mounted on ceramic substrate of 250mm^{2}X0.8mm

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	30			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, R_{BE}= ∞	25			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	15			
Collector-base cut-off current	I_{CBO}	V_{CB}= 20 V , I_E= 0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 10V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1A, I_B=20mA			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=1A, I_B=20mA			1.2	
DC current gain	h_{FE}	V_{CE}= 5V, I_C= 500mA	800		3200	
		V_{CE}= 5V, I_C= 1 A	600			
Turn-on time	t_{on}	See Specified Test Circuit		0.14		us
Storage time	t_{stg}			1.35		
Fall time	t_f			0.1		
Collector output capacitance	C_{ob}	V_{CB}= 10V,f=1MHz		27		pF
Transition frequency	f_T	V_{CE}= 10V, I_C=50mA		260		MHz

■ Marking

Marking	CU

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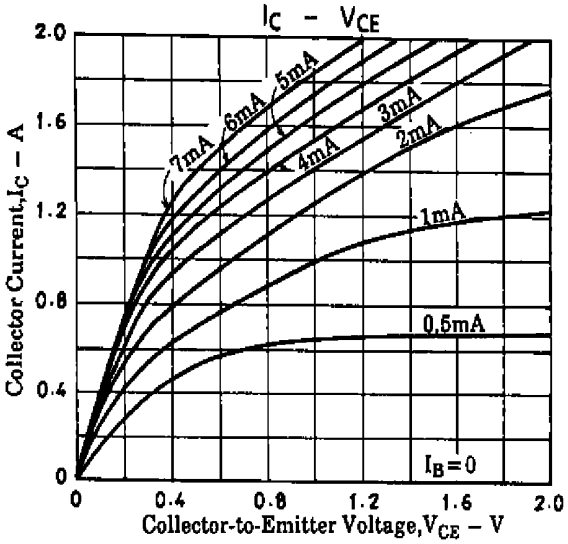
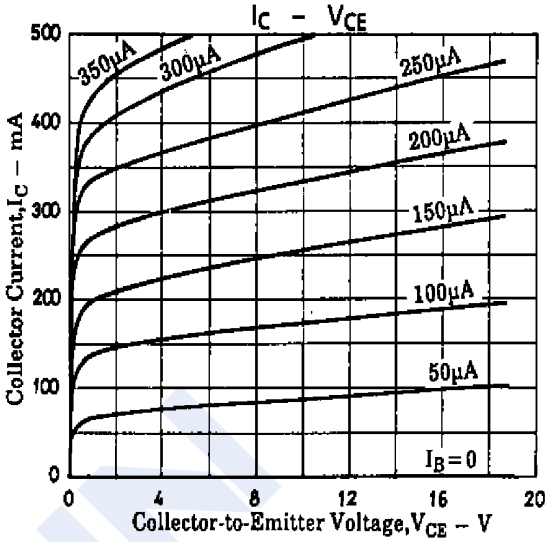
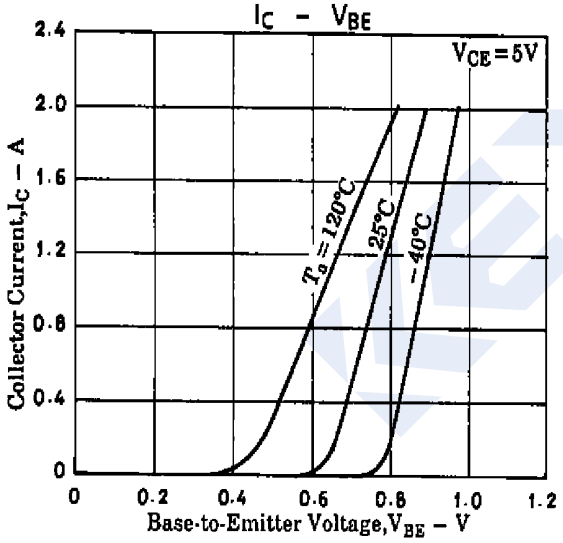
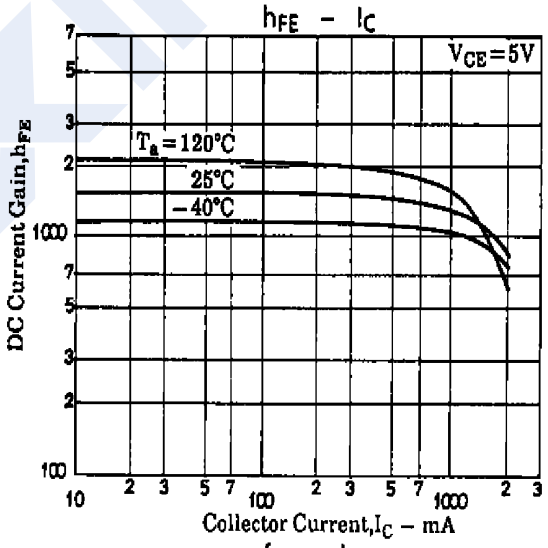
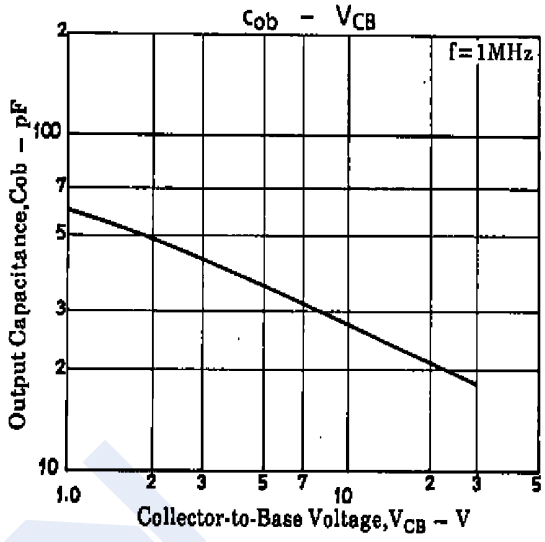
■ Typical Characterisitics

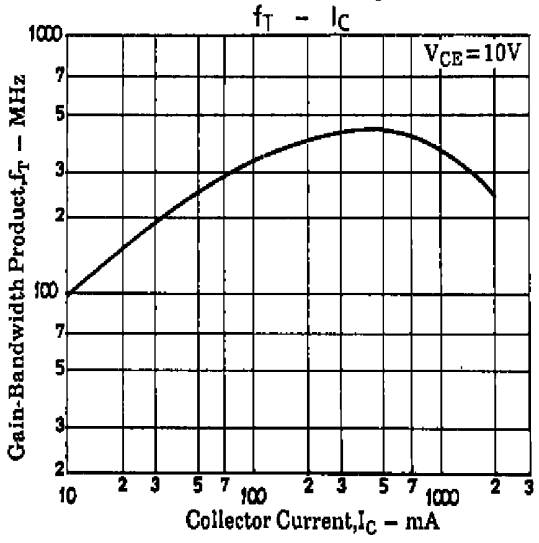












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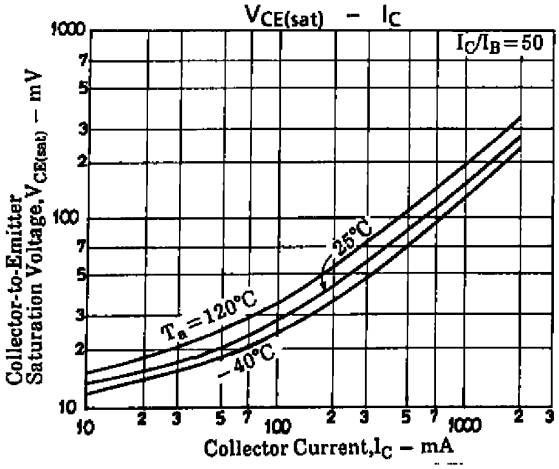
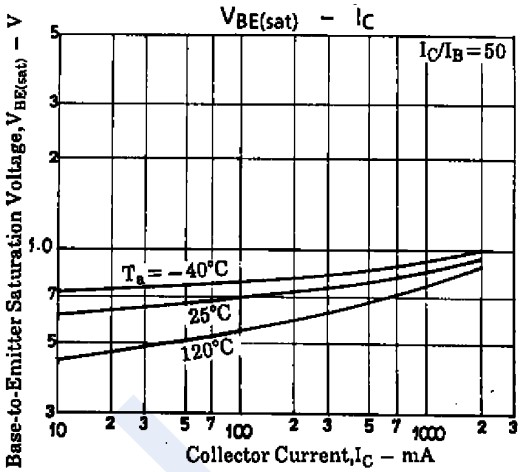
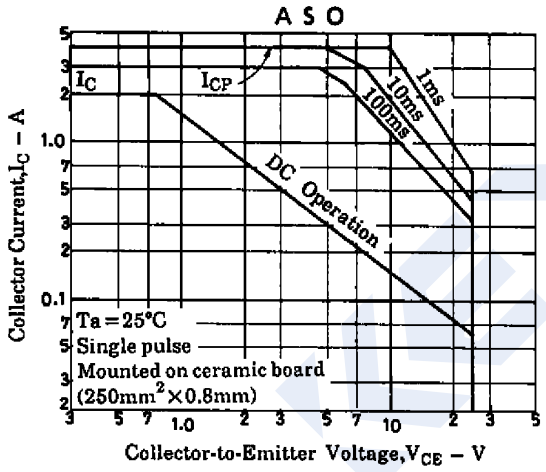
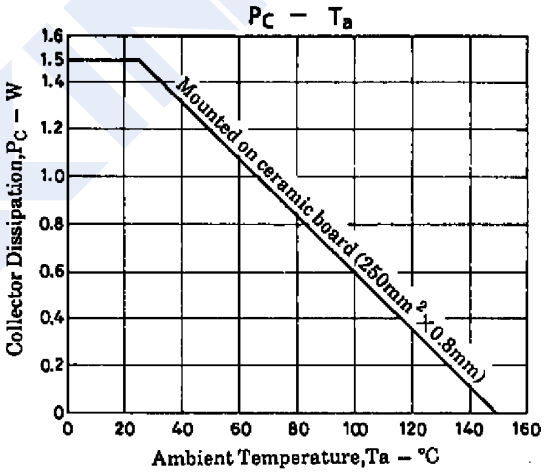
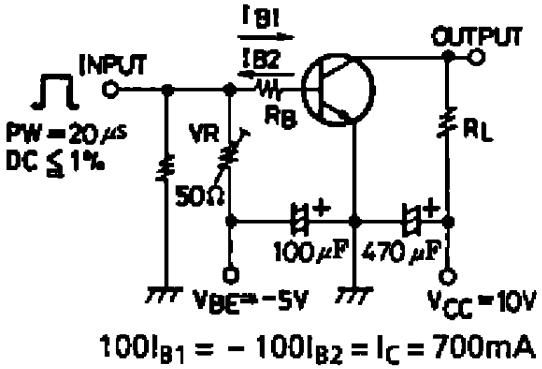








Switching Time Test Circuit



$100I_{B1} = -100I_{B2} = I_C = 700mA$