

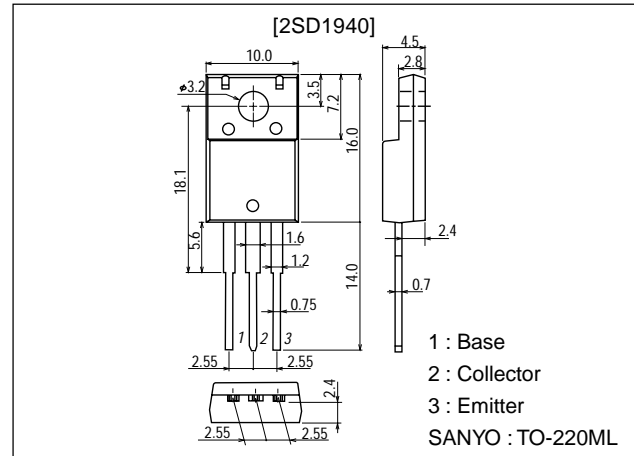
**2SD1940****85V/6A, AF 25 to 30W
Output Applications****Features**

- Micaless package facilitating mounting.
- Wide ASO.

Package Dimensions

unit:mm

2041A

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		100	V
Collector-to-Emitter Voltage	V_{CEO}		85	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		6	A
Collector Current (Pulse)	I_{CP}		10	A
Collector Dissipation	P_C	$T_c=25^\circ\text{C}$	25	W
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=40\text{V}, I_E=0$			0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.1	mA
DC Current Gain	h_{FE1}	$V_{CE}=5\text{V}, I_C=1\text{A}$	60*		320*	
	h_{FE2}	$V_{CE}=5\text{V}, I_C=3\text{A}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=5\text{V}, I_C=1\text{A}$		15		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4\text{A}, I_B=0.4\text{A}$			2.0	V
Base-to-Emitter Voltage	V_{BE}	$V_{CE}=5\text{V}, I_C=1\text{A}$			1.5	V
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		110		pF

* : The 2SD1940 is classified by 1A h_{FE} as follows :

60	D	120	100	E	200	160	F	320
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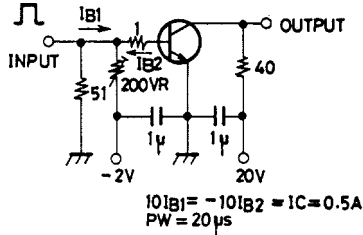
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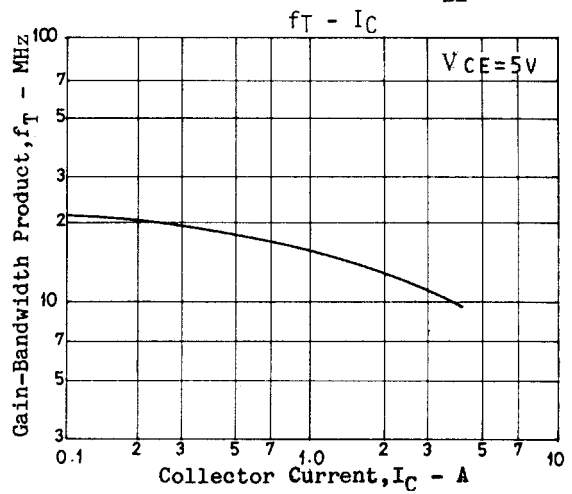
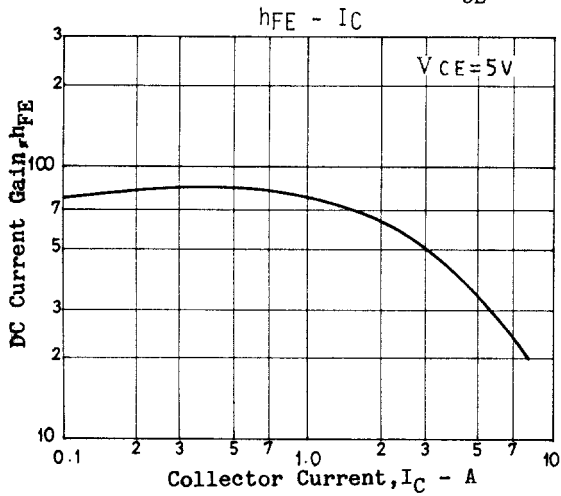
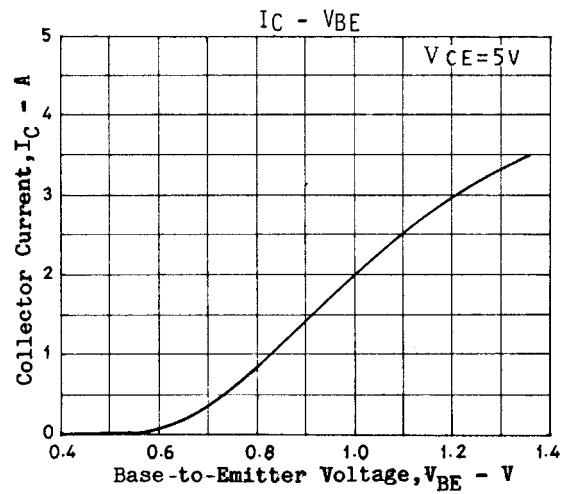
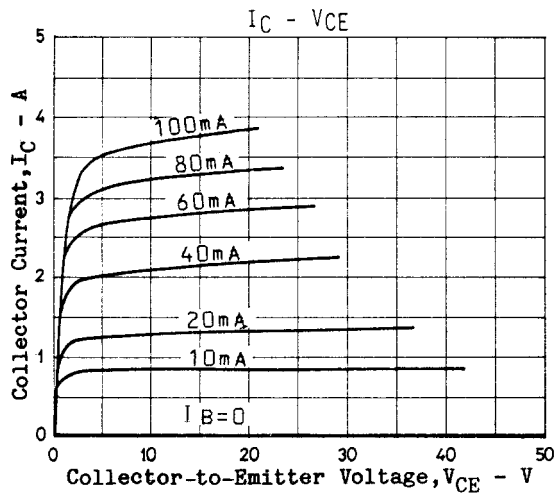
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=5mA, I_E=0$	100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	85			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=5mA, I_C=0$	6			V
Turn-ON Time	t_{on}	See specified Test Circuit.		0.28		μs
Fall Time	t_f	See specified Test Circuit.		0.50		μs
Storage Time	t_{stg}	See specified Test Circuit.		3.60		μs

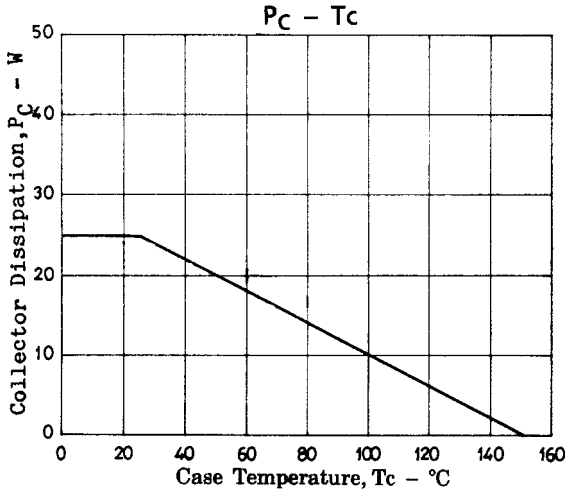
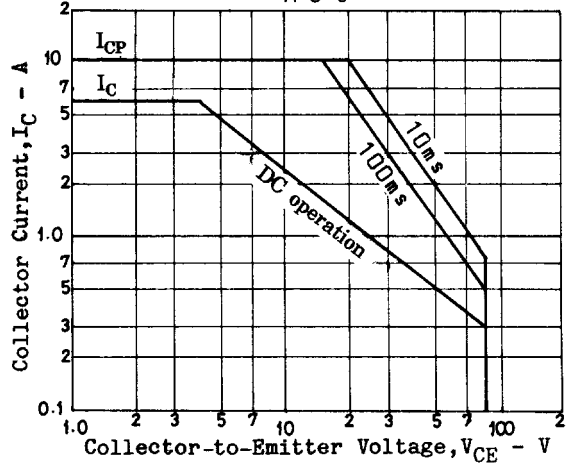
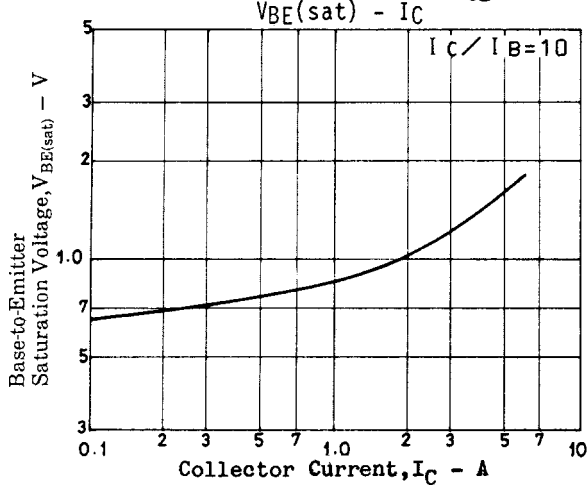
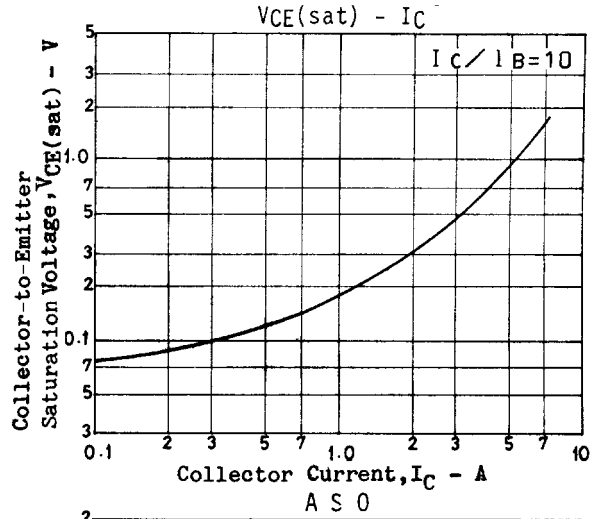
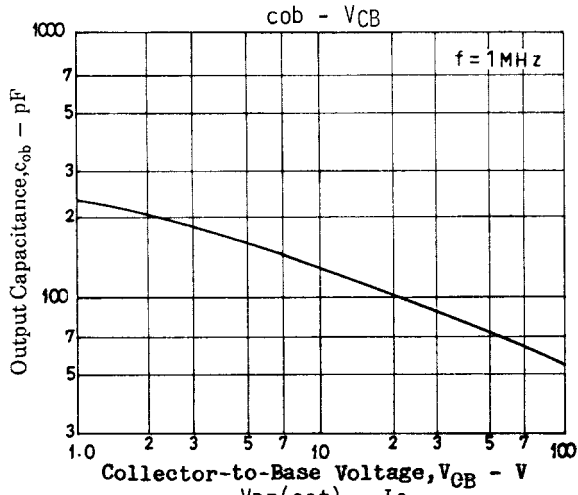
Switching Time Test Circuit



Unit (resistance : Ω , capacitance : F)



2SD1940



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