

NPN Epitaxial Planar Silicon Transistor

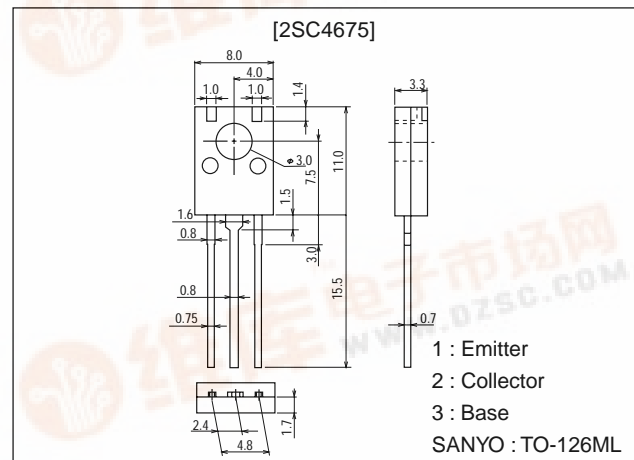
SANYO**2SC4675****20V/8A Switching Applications****Features**

- Adoption of MBIT process.
- Low saturation voltage.
- Fast switching speed.
- Large current capacity.

Package Dimensions

unit:mm

2042B

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		30	V
Collector-to-Emitter Voltage	V_{CEO}		20	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		8	A
Collector Current (Pulse)	I_{CP}		12	A
Base Current	I_B		1.5	A
Collector Dissipation	P_C		1.5	W
		$T_C=25^\circ\text{C}$	10	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}	$V_{CB}=20\text{V}, I_E=0$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			1	μA
DC Current Gain	h_{FE1}	$V_{CE}=2\text{V}, I_C=500\text{mA}$	100*		400*	
	h_{FE2}	$V_{CE}=2\text{V}, I_C=6\text{A}$	70			

* : The 2SC4675 is classified by 500mA h_{FE} as follows.

100	R	200	140	S	280	200	T	400
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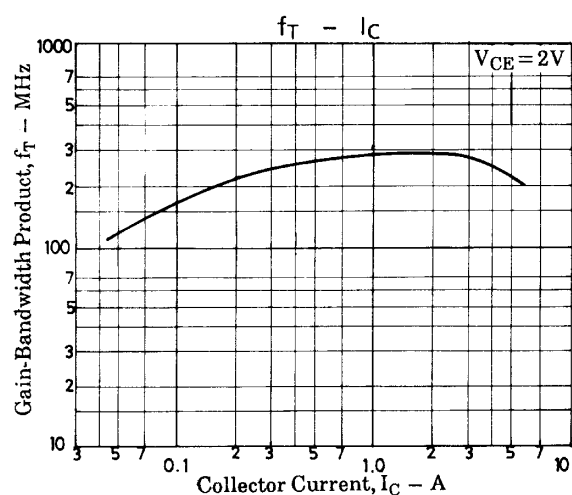
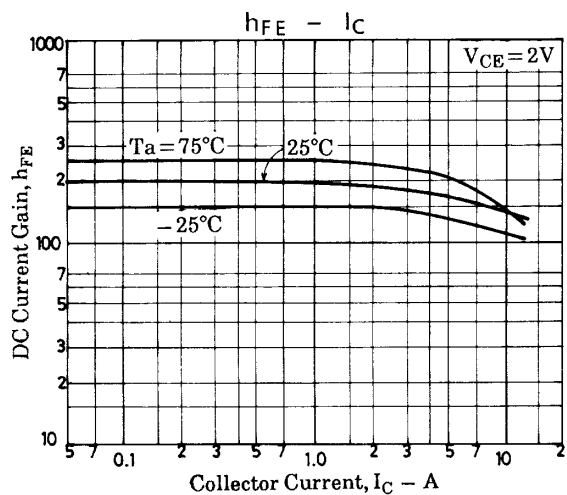
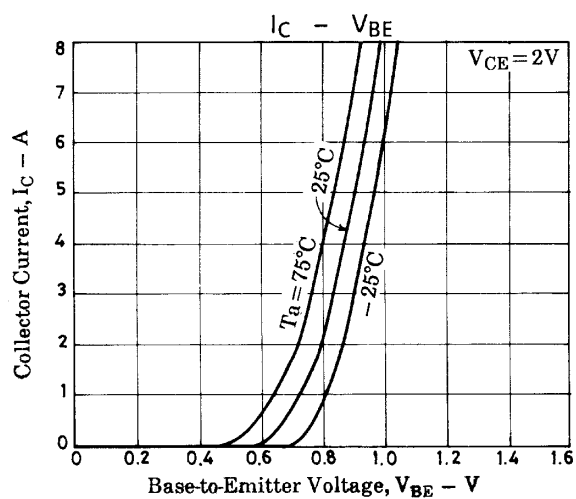
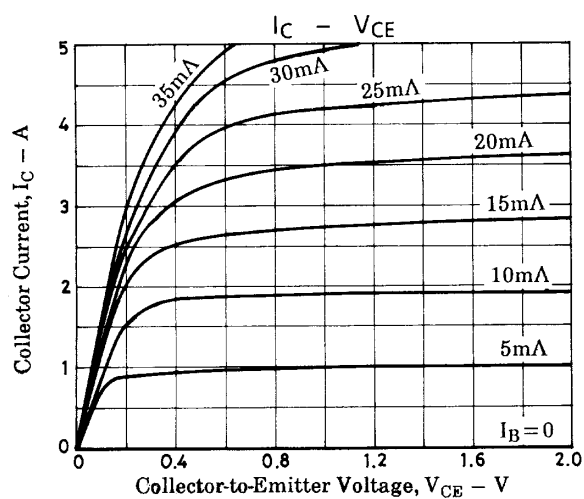
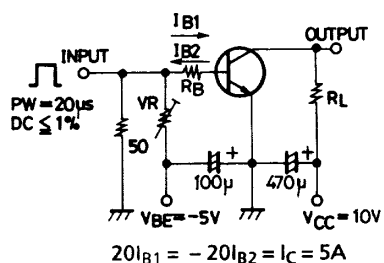
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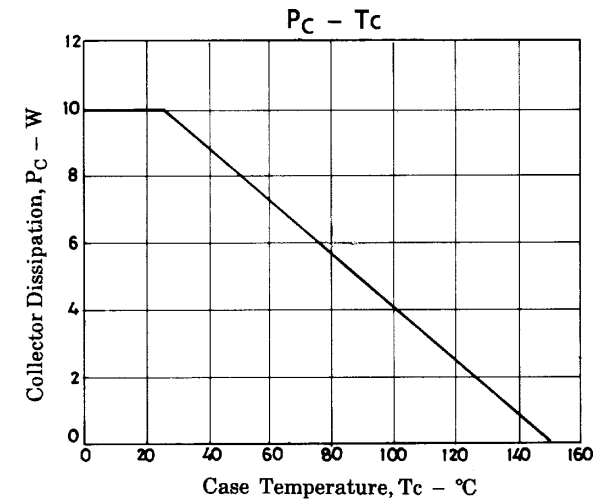
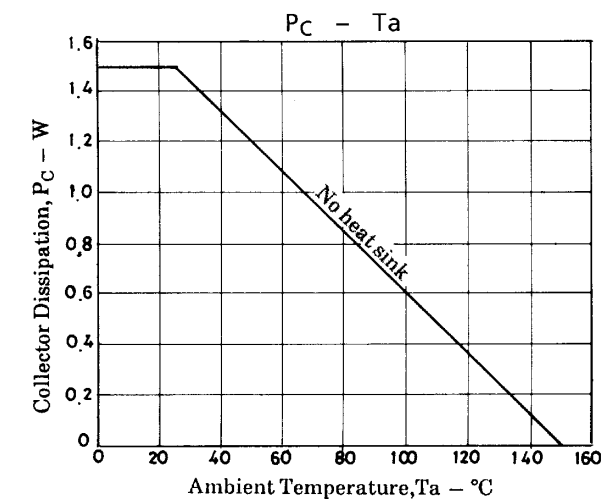
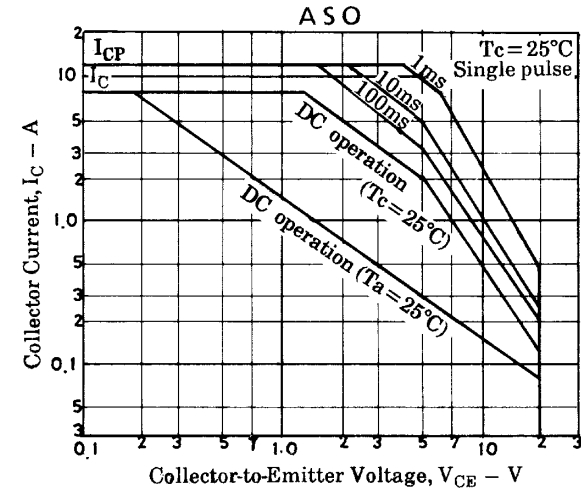
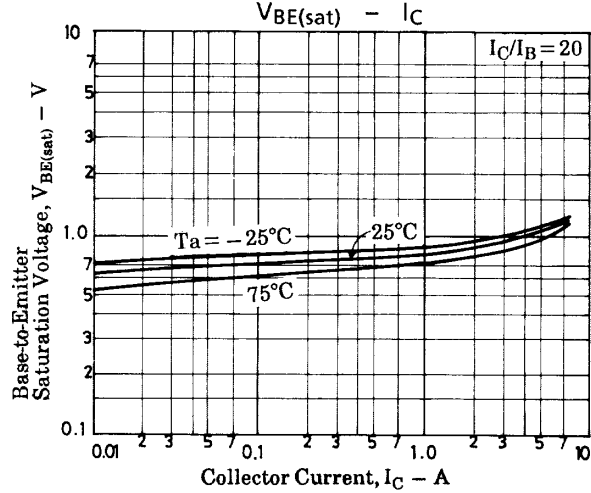
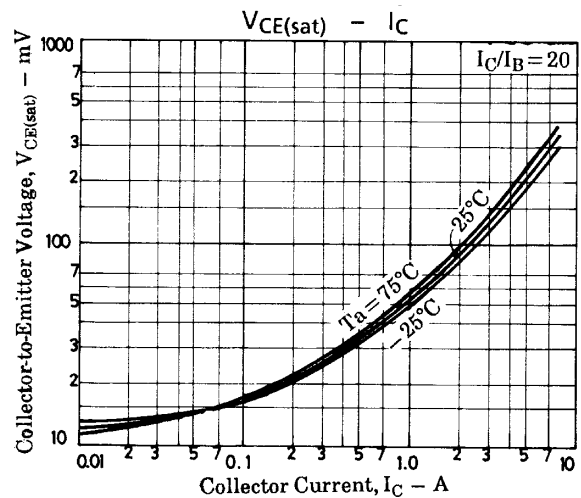
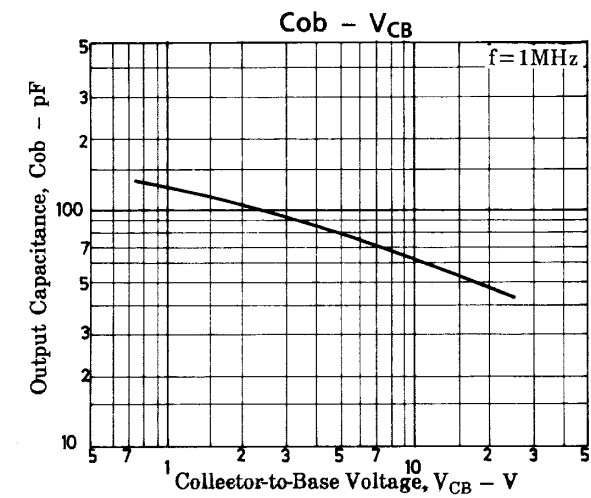
2SC4675

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	$V_{CE}=2V, I_C=500mA$		250		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		60		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5A, I_B=250mA$		220	400	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5A, I_B=250mA$		1	1.3	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	20			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V
Turn-ON Time	t_{on}	See specified test circuit.		30		ns
Storage Time	t_{stg}	See specified test circuit.		250		ns
Fall Time	t_f	See specified test circuit.		15		ns

Switching Time Test Circuit



2SC4675



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