NPN Epitaxial Planar Silicon Transistor



2SC4675

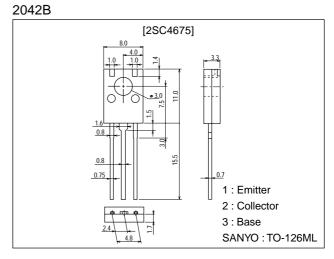
20V/8A Switching Applications

Features

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

Package Dimensions

unit:mm



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	VEBO		5	V
Collector Current	۱ _C		8	A
Collector Current (Pulse)	ICP		12	A
Base Current	Ι _Β		1.5	A
Collector Dissipation	PC		1.5	W
		Tc=25°C	10	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Collector Cutoff Current	I _{CBO}	V _{CB} =20V, I _E =0			1	μA
Emitter Cutoff Current	IEBO	$V_{EB}=4V, I_{C}=0$			1	μΑ
DC Current Gain	h _{FE} 1	$V_{CE}=2V, I_{C}=500mA$	100*		400*	
	h _{FE} 2	V _{CE} =2V, I _C =6A	70			

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

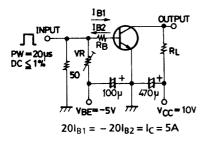
100 R 200 140 S 280 200 T 400

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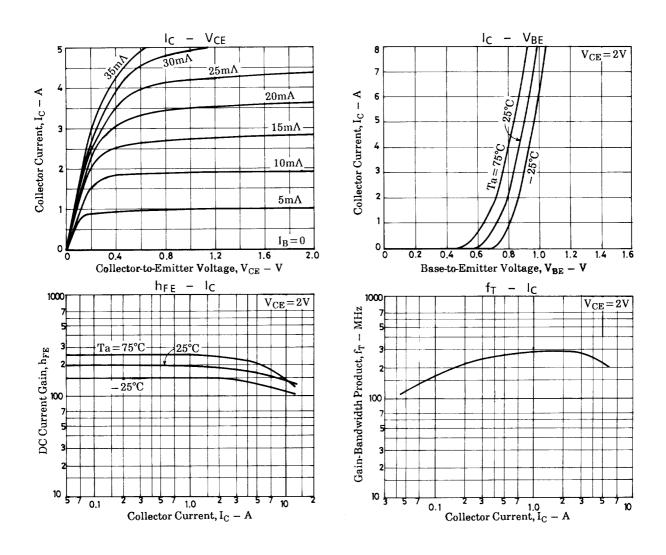
SANYO Electric Co., Ltd. Semiconductor Bussiness Headquaters TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

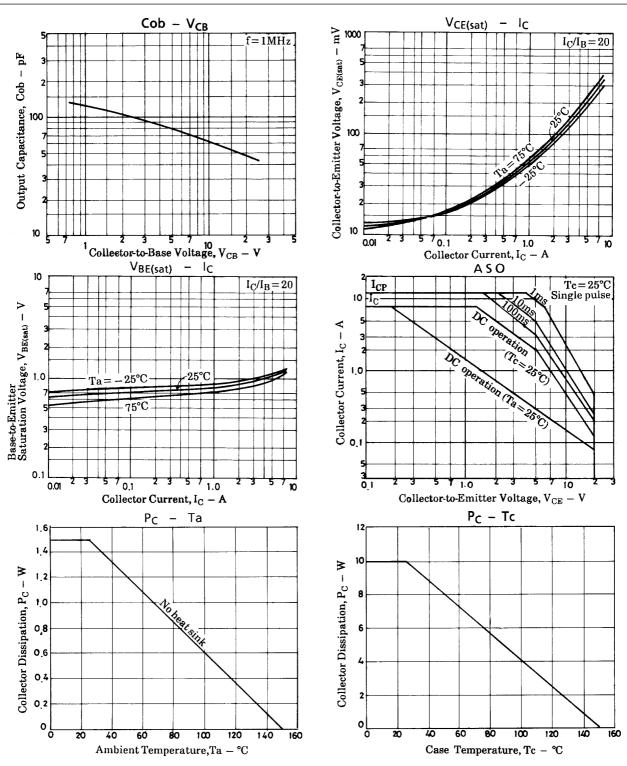
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Unit
Gain-Bandwidth Product	fT	V _{CE} =2V, I _C =500mA		250		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		60		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =5A, I _B =250mA		220	400	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =5A, I _B =250mA		1	1.3	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =10µA, I _E =0	30			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	20			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	5			V
Turn-ON Time	ton	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



Unit (resistance : Ω , capacitance : F)





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