

Ordering number:EN3871

NPN Epitaxial Planar Silicon Transistor



2SC4727

20V/8A Switching Applications

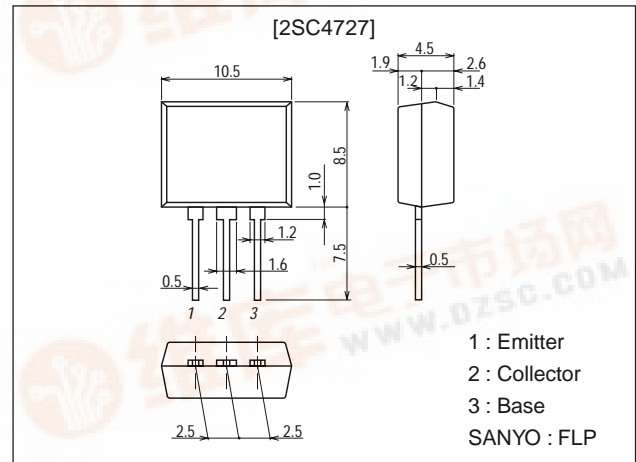
Features

- Adoption of MBIT process.
- Low saturation voltage.
- Fast switching speed.
- Large current capacity.
- It is possible to make appliances more compact because its height on board is 9.5mm.
- Effective in automatic inserting and counting stocked amount because of being provided for radial taping.

Package Dimensions

unit:mm

2084B



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		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
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =20V, I _E =0			1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0			1	μA
DC Current Gain	h _{FE1}	V _{CE} =2V, I _C =500mA	100*		400*	
	h _{FE2}	V _{CE} =2V, I _C =6A	70			
Gain-Bandwidth Product	f _T	V _{CE} =2V, I _C =500mA		250		MHz
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

* : The 2SC4727 is classified by 500mA h_{FE} as follows :

100	R	200	140	S	280	200	T	400
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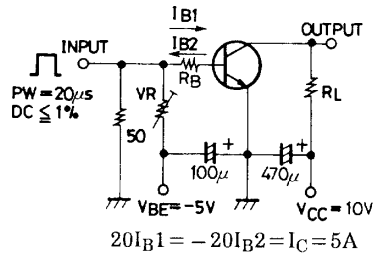
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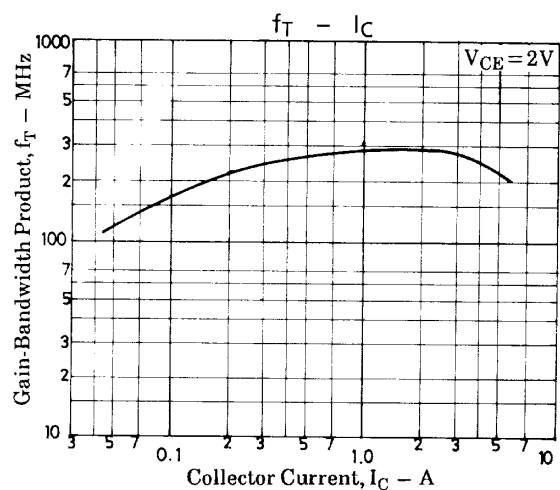
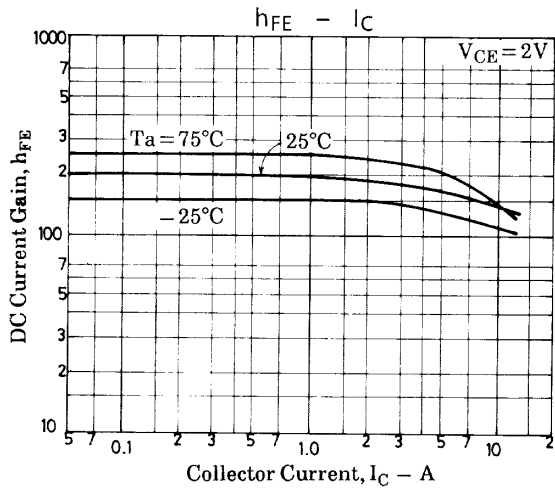
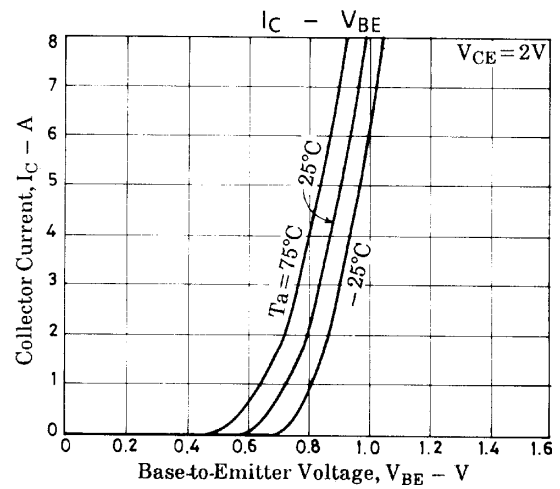
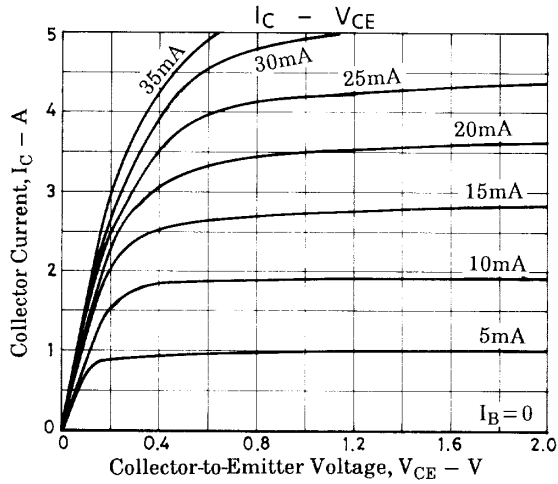
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		60		pF
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	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

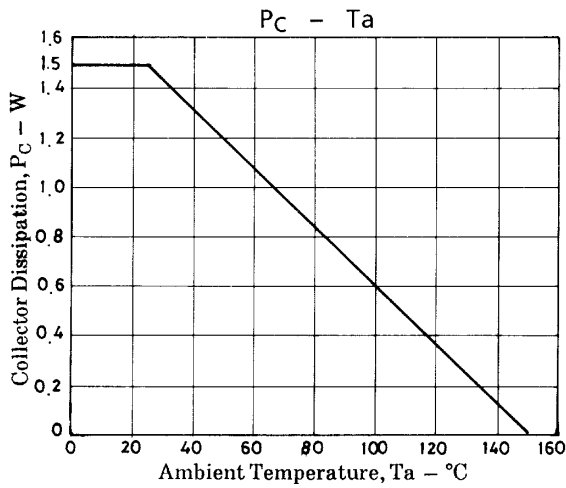
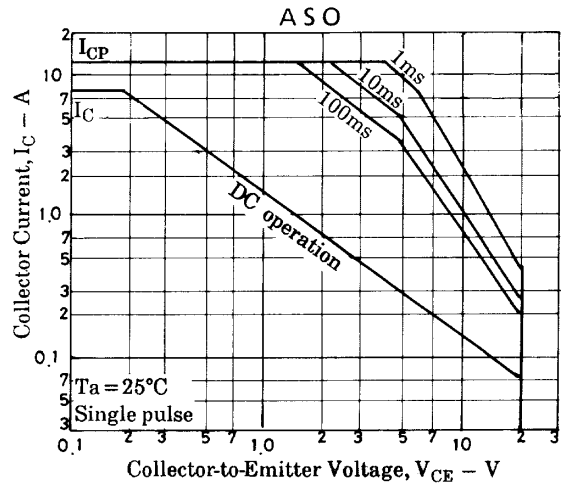
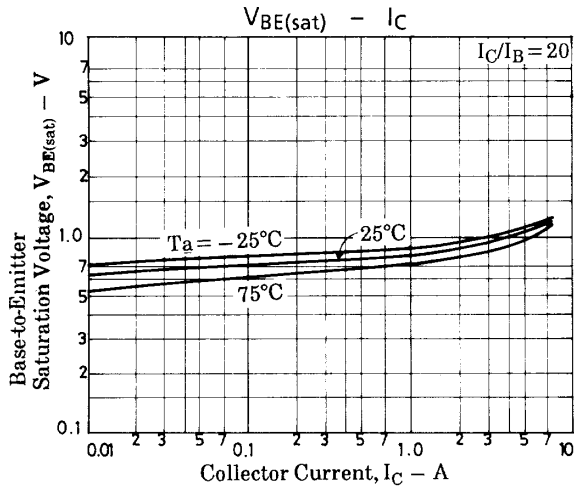
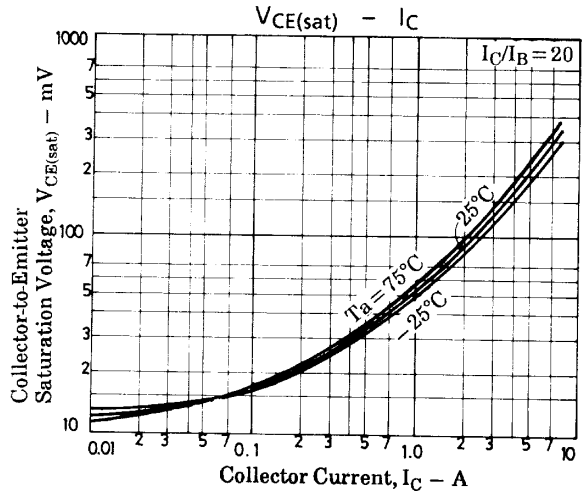
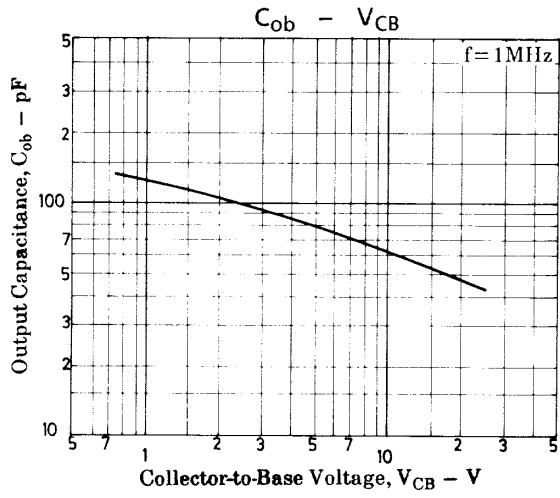
Switching Time Test Circuit



Unit (resistance : Ω , capacitance : F)



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