



2SC4727

20V/8A Switching Applications

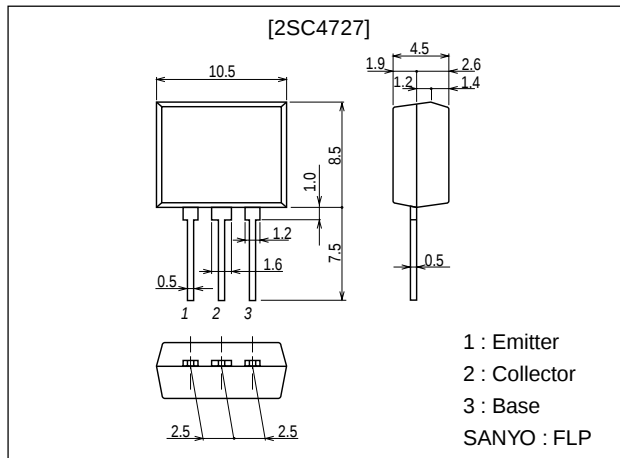
Features

- 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_{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
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		–55 to +150	°C

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=20V, I_E=0$			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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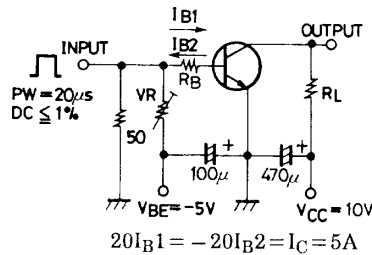
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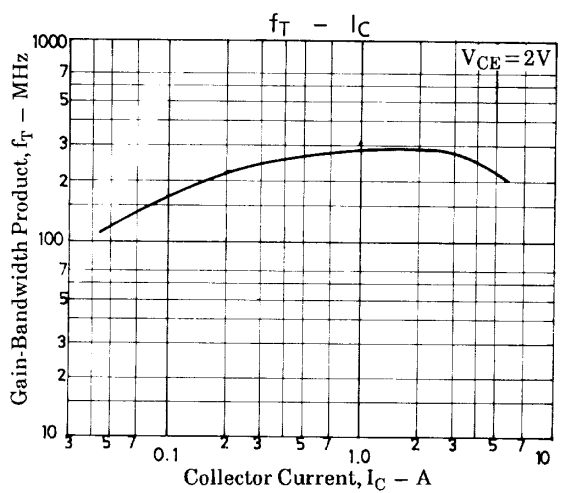
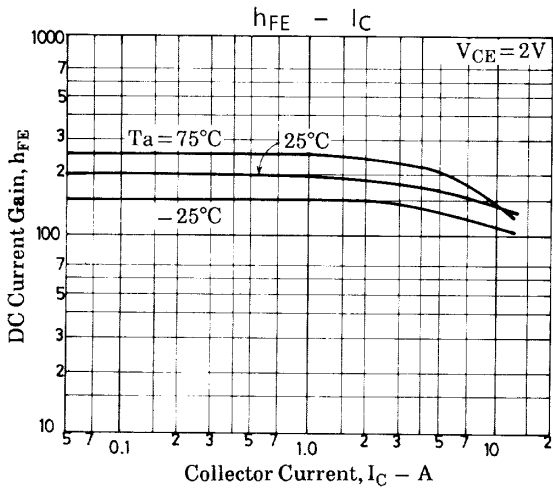
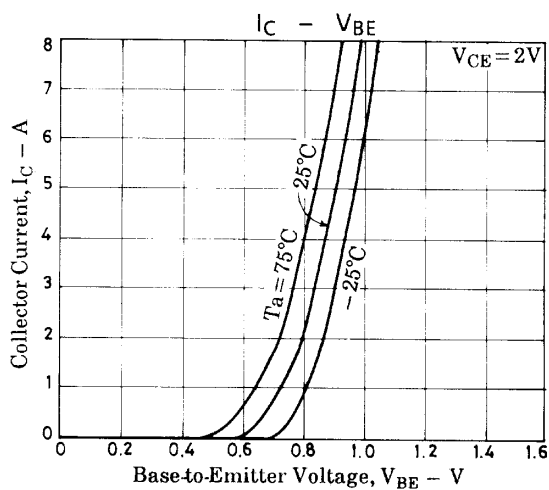
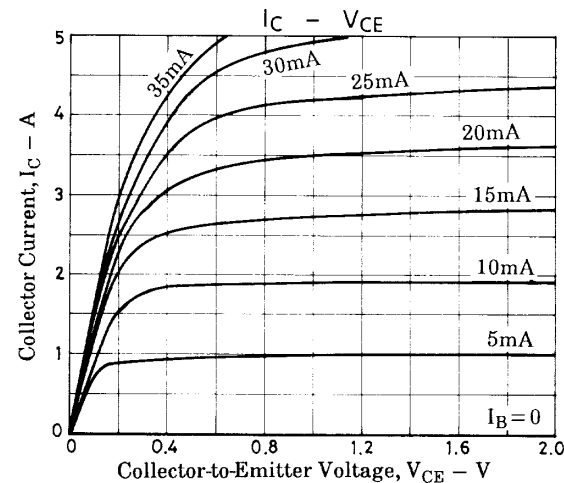
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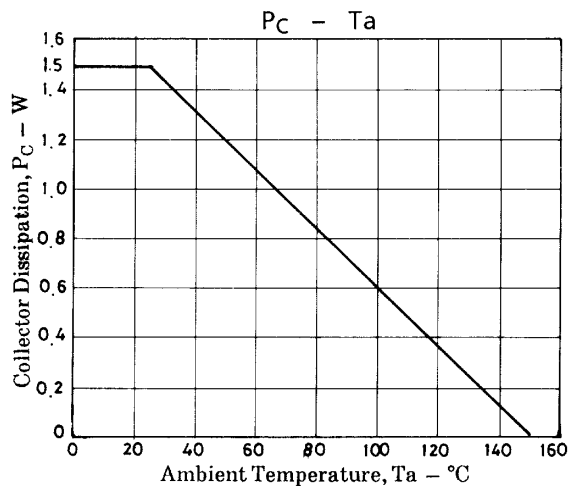
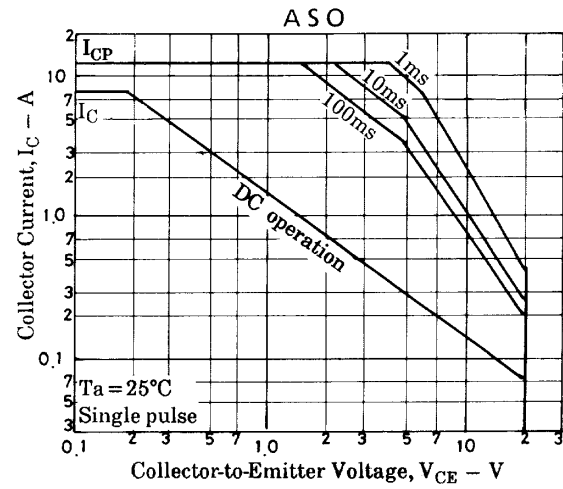
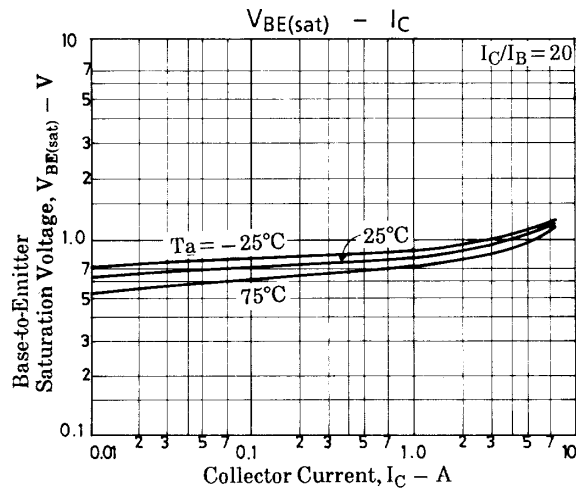
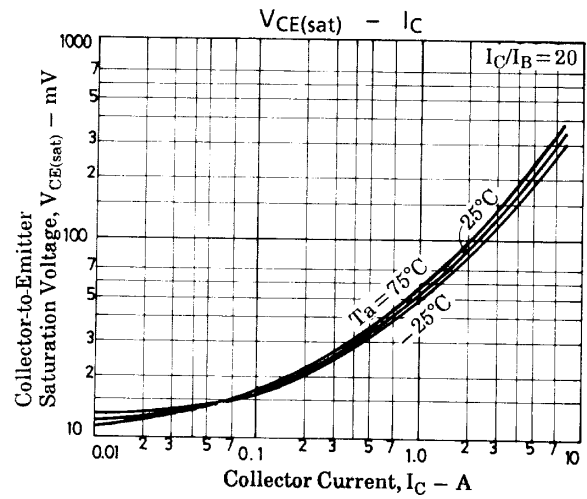
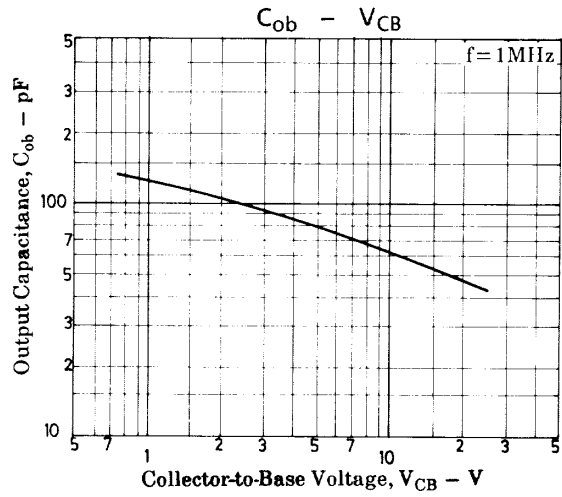
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		60		pF
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	20			V
Emitter-to-Base Breakdown 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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