Low Frequency Transistor (50V, 3A)

2SC4672

●Features

1) Low saturation voltage, typically $V_{CE\ (sat)}$ =0.1V at I_C/I_B =1A /50mA.
2) Excellent DC current gain characteristics.
3) Complements the 2SA1797.

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	60	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	3	A (DC)
		6	A (Pulse) ∗1
Collector power dissipation	P_C	0.5	W
		2 ∗2	
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−55 to +150	°C

∗1 Single pulse, Pw=10ms
∗2 40×40×^{t}0.7mm Ceramic board

●Packaging specifications and h_{FE}

Type	2SC4672
Package	MPT3
h_{FE}	PQ
Marking	DK ∗
Code	T100
Basic ordering unit (pieces)	1000

∗ Denotes h_{FE}

h_{FE} values are classified as follows:

Item	P	Q
h_{FE}	82 to 180	120 to 270

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	60	–	–	V	I_C=50μA
Collector-emitter breakdown voltage	BV_{CEO}	50	–	–	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	6	–	–	V	I_E=50μA
Collector cutoff current	I_{CBO}	–	–	0.1	μA	V_{CB}=60V
Emitter cutoff current	I_{EBO}	–	–	0.1	μA	V_{EB}=5V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	0.13	0.35	V	I_C/I_B=1A/50mA ∗
DC current transfer ratio	$h_{FE}1$	82	–	270	–	V_{CE}=2V, I_C=0.5A ∗
	$h_{FE}2$	45	–	–	–	V_{CE}=2V, I_C=1.5A ∗
Transition frequency	f_T	–	210	–	MHz	V_{CE}=2V, I_E=−0.5A, f=100MHz
Output capacitance	Cob	–	25	–	pF	V_{CB}=10V, I_E=0A, f=1MHz

∗Measured using pulse current.

●Electrical characteristics curves

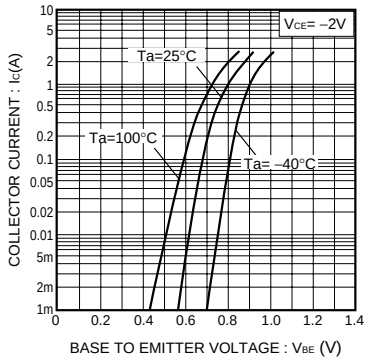

Fig.1 Grounded emitter propagation characteristics

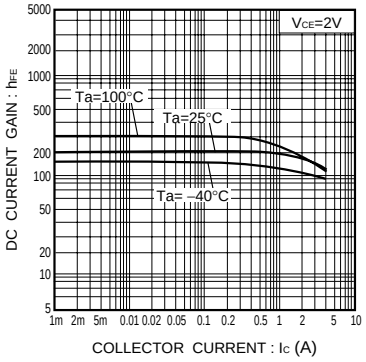

Fig.2 DC current gain vs. collector current

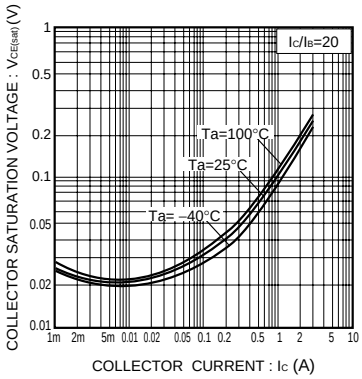

Fig.3 Collector-emitter saturation voltage vs. collector current

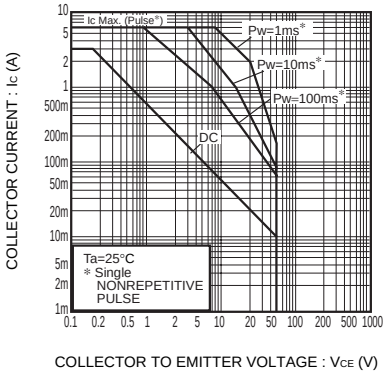

Fig.4 Safe Operating area

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