

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 ($T_a=25^\circ C$)

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	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

*1 Single pulse, $P_w=10ms$

*2 40×40×10.7mm 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 ($T_a=25^\circ C$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	60	–	–	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	50	–	–	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EBO}	6	–	–	V	$I_E=50\mu A$
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_{FE1}	82	–	270	–	$V_{CE}=2V, I_C=0.5A$ *
	h_{FE2}	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	C_{ob}	–	25	–	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

*Measured using pulse current.

Transistors

●Electrical characteristics curves

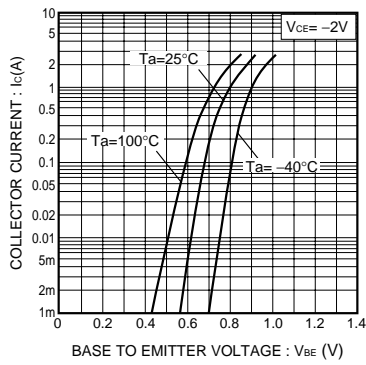


Fig.1 Grounded emitter propagation characteristics

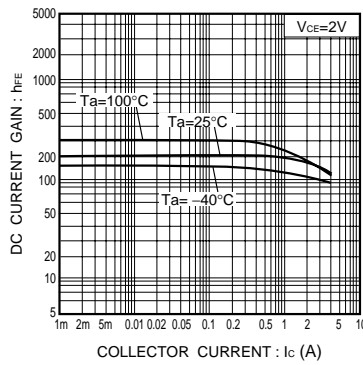


Fig.2 DC current gain vs. collector current

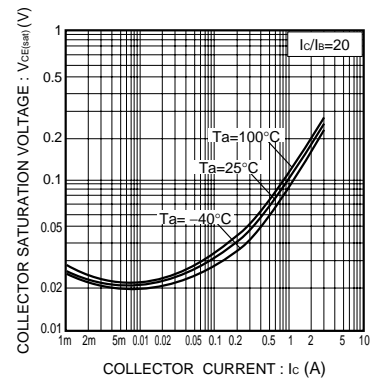


Fig.3 Collector-emitter saturation voltage vs. collector current

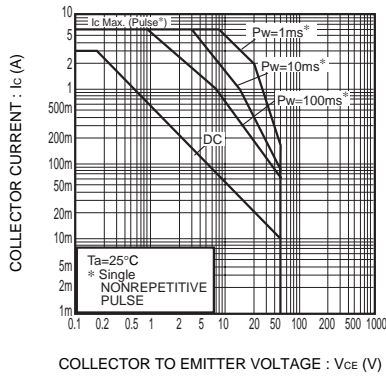


Fig.4 Safe Operating area