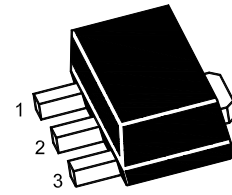


# 2SC4672U

## NPN Silicon Epitaxial Planar Power Transistor

Low Frequency Transistor



1.Base 2.Collector 3.Emitter  
SOT-89 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

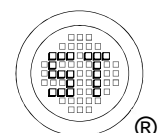
Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	60	V
Collector Emitter Voltage	$V_{CEO}$	50	V
Emitter Base Voltage	$V_{EBO}$	6	V
Collector Current - DC	$I_C$	3	A
Collector Current - Pulse ( $t_P = 10$ ms)	$I_{CP}$	6	A
Total Power Dissipation	$P_{tot}$	0.5 <sup>1)</sup> 2 <sup>2)</sup>	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	250 <sup>1)</sup> 62.5 <sup>2)</sup>	$^\circ\text{C/W}$

<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

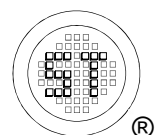
<sup>2)</sup> When mounted on a 40 X 40 X 0.7 mm ceramic board.



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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2\text{ V}$ , $I_C = 0.5\text{ A}$ at $V_{CE} = 2\text{ V}$ , $I_C = 1.5\text{ A}$	$h_{FE}$ $h_{FE}$	82 45	- -	270 -	- -
Collector Base Cutoff Current at $V_{CB} = 60\text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$
Collector Base Breakdown Voltage at $I_C = 50\text{ }\mu\text{A}$	$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $I_E = 50\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $I_C = 1\text{ A}$ , $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.35	V
Transition Frequency at $V_{CE} = 5\text{ V}$ , $I_C = 0.5\text{ A}$ , $f = 100\text{ MHz}$	$f_T$	-	210	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	25	-	pF



## Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

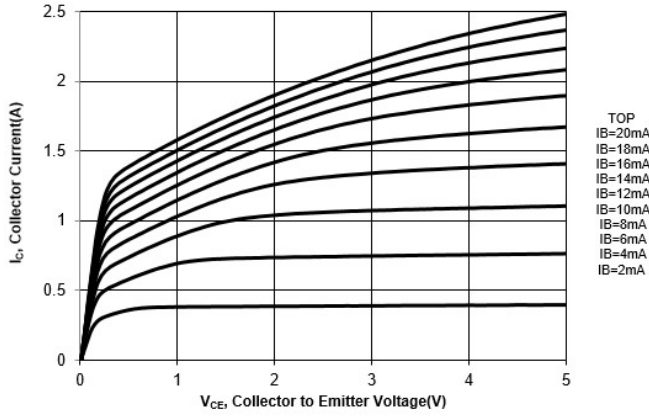


Fig. 2 Collector Current vs.  $V_{BE}$

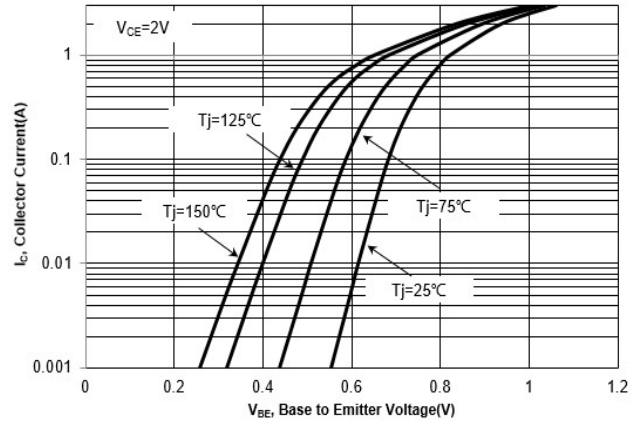


Fig 3. DC Current Gain vs. Collector Current

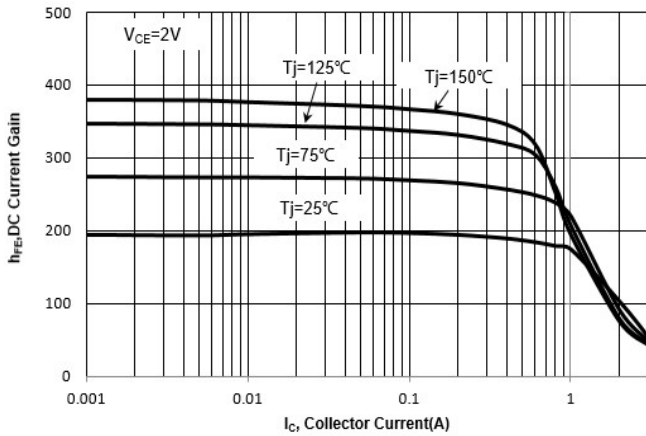
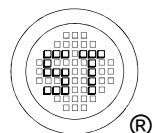
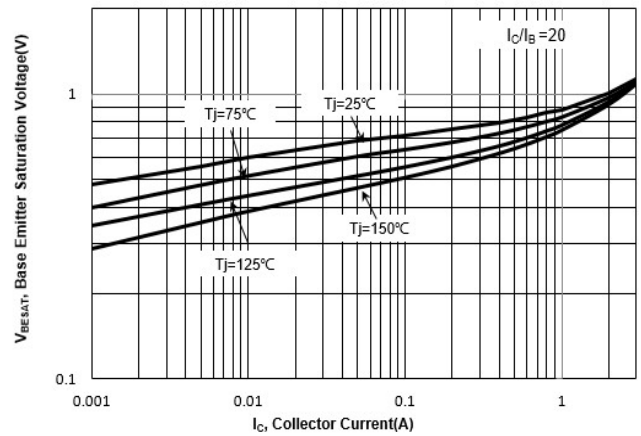


Fig 4.  $V_{BE(sat)}$  vs. Collector Current



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## Electrical Characteristics Curves

Fig. 5  $V_{CESAT}$  vs. Collector Current

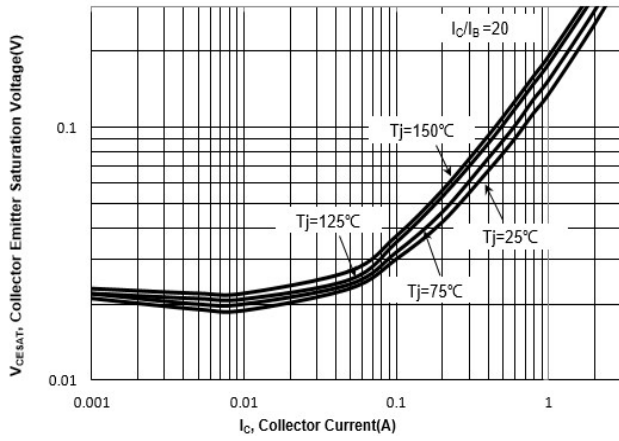


Fig. 6 Output Capacitance

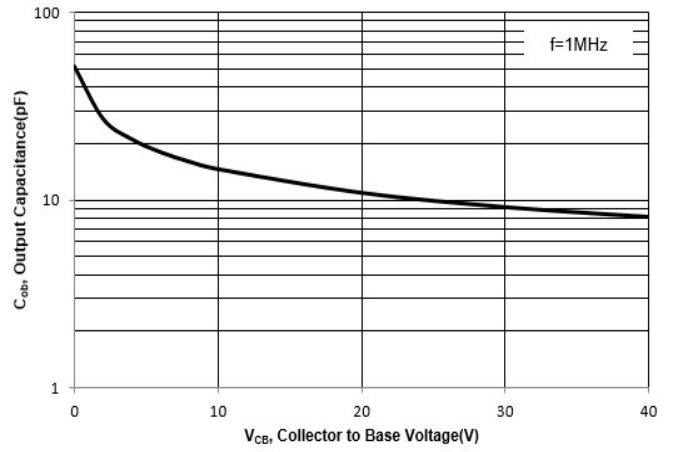
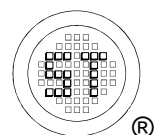
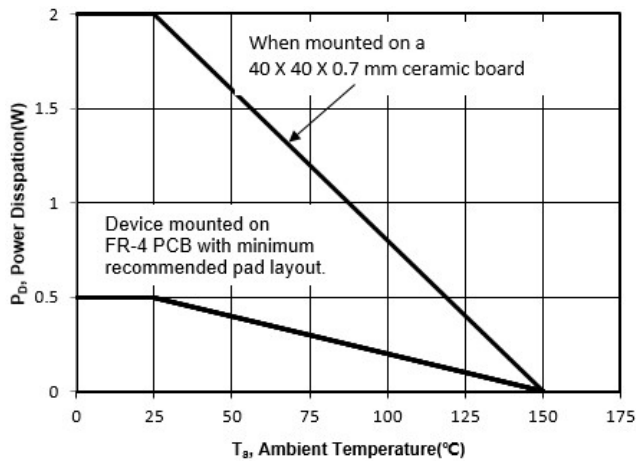


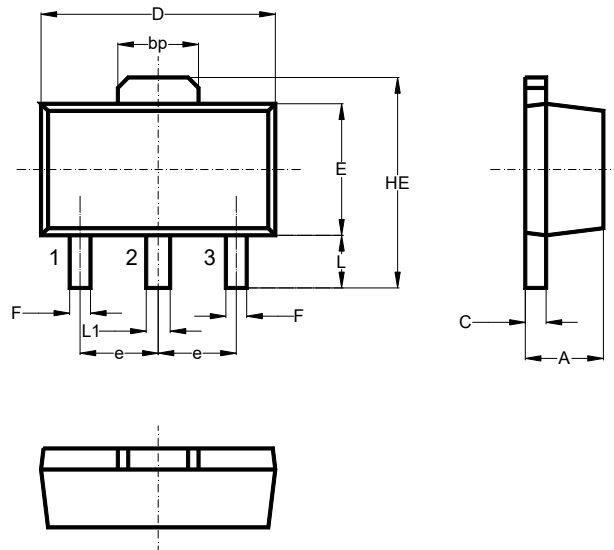
Fig. 7 Power Derating Curve



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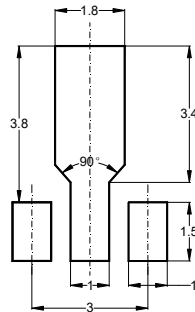
## Package Outline (Dimensions in mm)

## SOT-89



Unit	A	bp	C	D	E	F	HE	e	L	L1
mm	1.6	1.60	0.5	4.6	2.6	0.45	4.25	1.5	1.05	0.51
	1.4	1.50	0.3	4.4	2.4	0.35	3.75	typ.	0.95	0.41

## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-89	12	$8 \pm 0.1$	$0.315 \pm 0.004$	178	7	1,000
				330	13	4,000

## Marking information

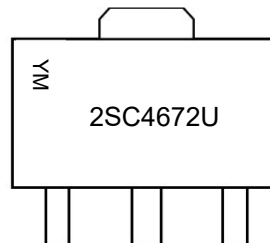
"2SC4672U" = Part No.

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial



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