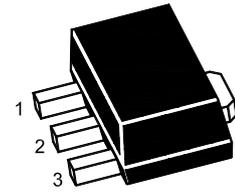


# 2SC4672U

## NPN Silicon Epitaxial Planar Transistor

Low Frequency Transistor



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

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

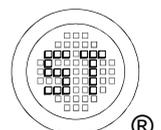
Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	60	V
Collector Emitter Voltage	$V_{CEO}$	50	V
Emitter Base Voltage	$V_{EBO}$	6	V
Collector Current - DC	$I_C$	3	A
Collector Current - Pulse ( $T_P = 10\text{ms}$ )	$I_{CP}$	6	A
Total Power Dissipation	$P_{tot}$	0.5 2	W
Junction Temperature	$T_j$	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.

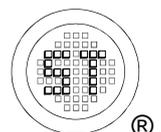
<sup>2)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with 1-inch square copper plate in still air.



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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 $V_{CE} = 5\text{ V}$ , $-I_E = 0.5\text{ A}$ , $f = 100\text{ MHz}$	$f_T$	-	210	-	MHz
Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	25	-	pF



## Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

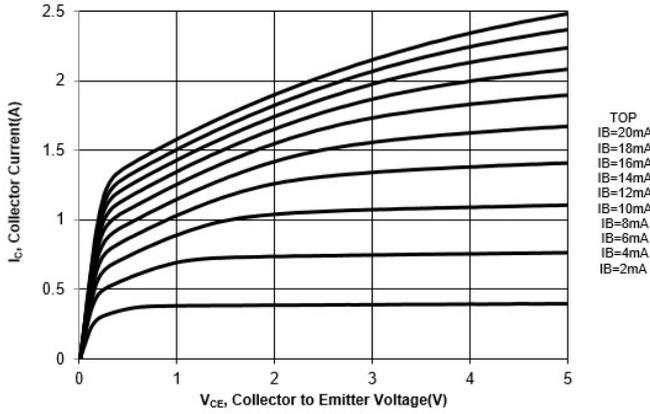


Fig. 2 Output Characteristics Curve

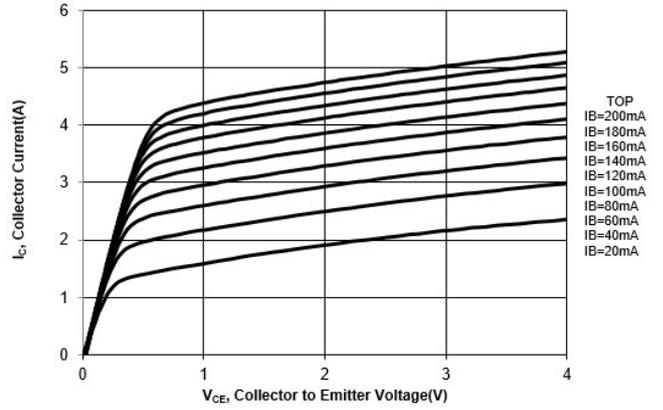


Fig. 3 Collector Current vs.  $V_{BE}$

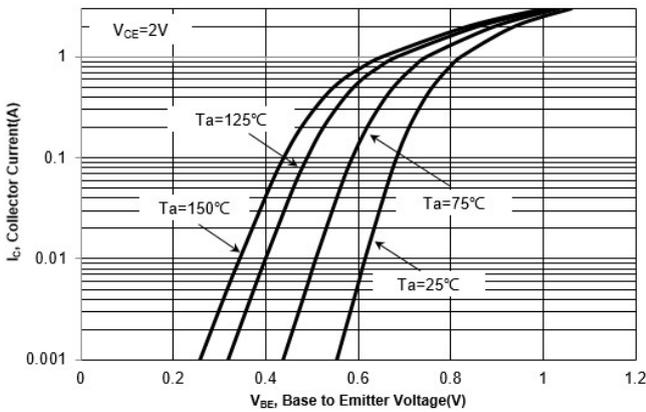
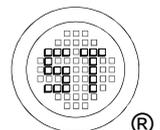
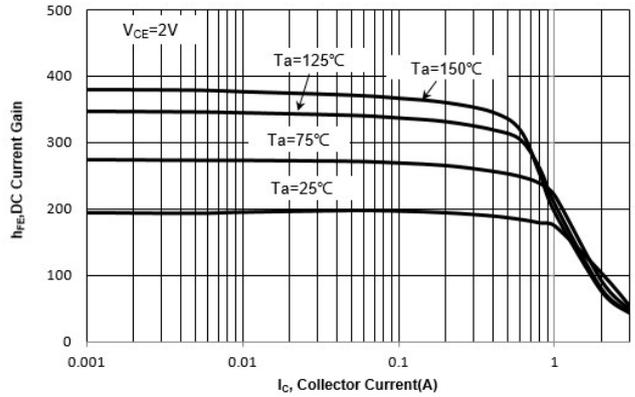


Fig 4. DC Current Gain vs. Collector Current



## Electrical Characteristics Curves

Fig 5.  $V_{BE(sat)}$  vs. Collector Current

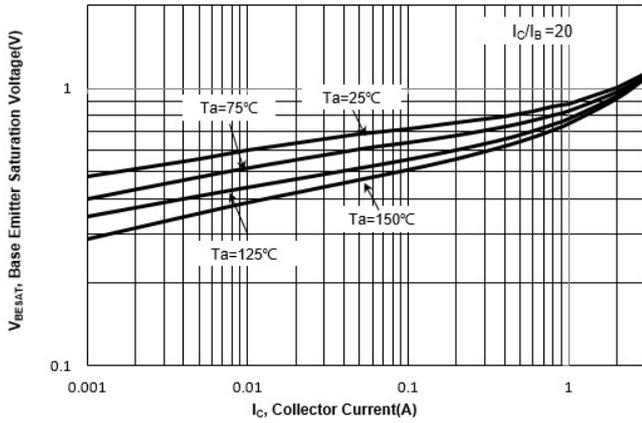


Fig 6.  $V_{CE(sat)}$  vs. Collector Current

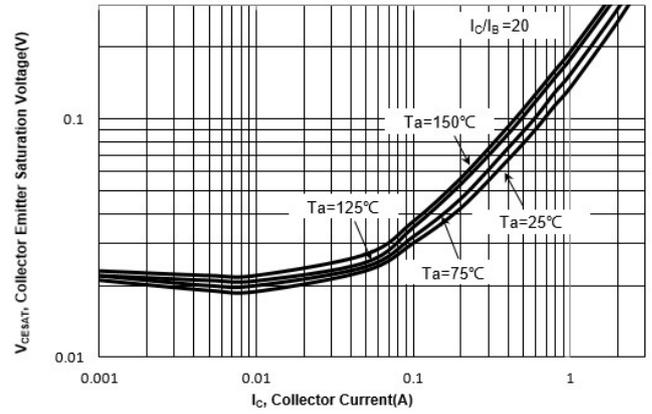


Fig 7. Capacitance Characteristics

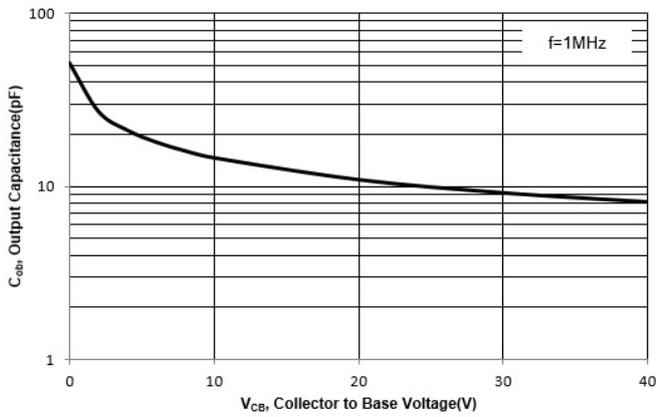
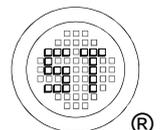
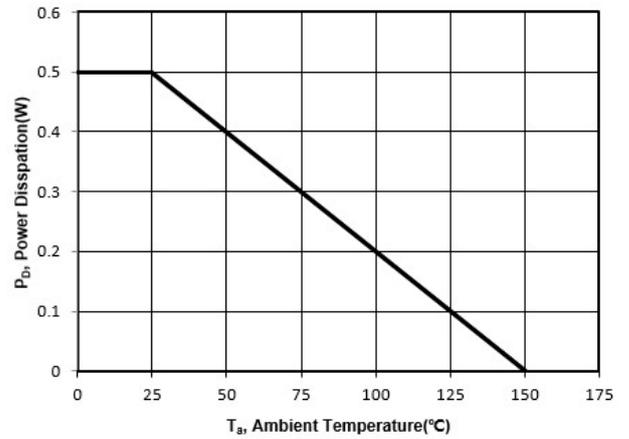


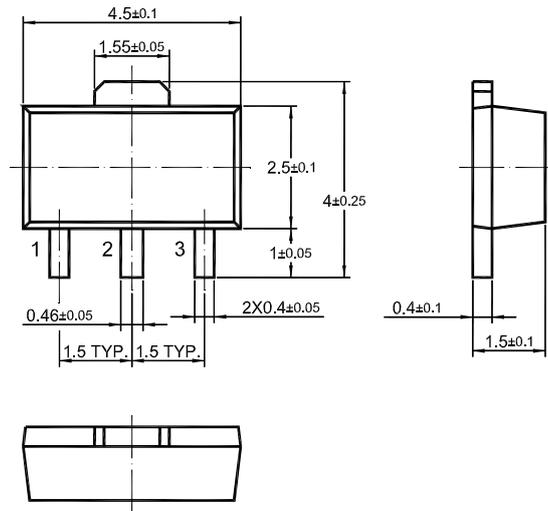
Fig 8. Power Derating Curve



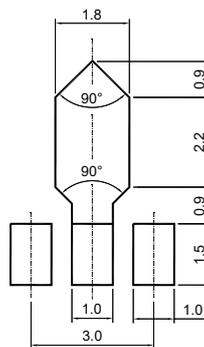
# 2SC4672U

## Package Outline (Dimensions in mm)

## SOT-89



## 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

