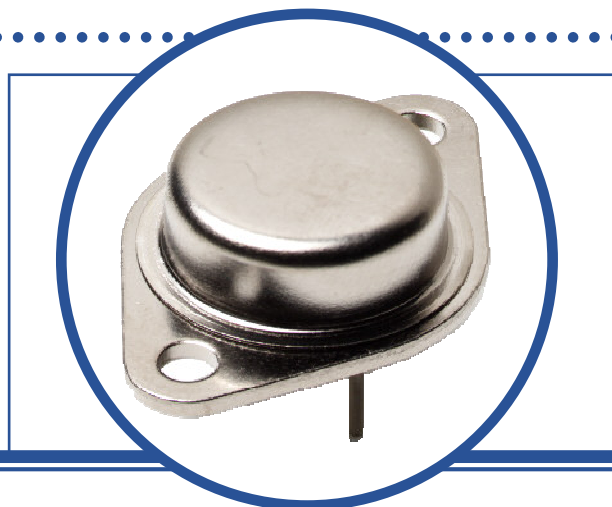


# SILICON POWER NPN TRANSISTOR

## 2N6673

- High Voltage
- Hermetic Low Profile TO3 Metal Package.
- Designed For Power Switching and Linear Applications
- Screening Options Available



### ABSOLUTE MAXIMUM RATINGS ( $T_C = 25^\circ\text{C}$ unless otherwise stated)

$V_{CBO}$	Collector – Base Voltage		650V
$V_{CEX}$	Collector – Emitter Voltage		650V
$V_{CEO}$	Collector – Emitter Voltage		400V
$V_{EBO}$	Emitter – Base Voltage		8V
$I_C$	Continuous Collector Current		8A
$I_B$	Base Current		4A
$P_D$	Total Power Dissipation at $T_A = 25^\circ\text{C}$		6W
	Derate Above $25^\circ\text{C}$		0.0343 W/ $^\circ\text{C}$
$P_D$	Total Power Dissipation at $T_C = 25^\circ\text{C}$		150W
	Derate Above $25^\circ\text{C}$		0.857 W/ $^\circ\text{C}$
$T_J$	Junction Temperature Range		-65 to +150 $^\circ\text{C}$
$T_{stg}$	Storage Temperature Range		-65 to +150 $^\circ\text{C}$

### THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case	1.17	$^\circ\text{C}/\text{W}$

Semelab Limited reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.



# SILICON POWER NPN TRANSISTOR 2N6673

## ELECTRICAL CHARACTERISTICS ( $T_C = 25^\circ\text{C}$ unless otherwise stated)

Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
$V_{(BR)CEO}^{(1)}$	Collector-Emitter Breakdown Voltage	$I_C = 200\text{mA}$	400			V
$I_{CEX}$	Collector-Emitter Cut-Off Current	$V_{CE} = 650\text{V}$ $V_{BE} = -1.5\text{V}$ $T_A = 125^\circ\text{C}$			0.1 1.0	mA
$I_{CBO}$	Collector Cut-Off Current	$V_{CB} = 650\text{V}$ $I_E = 0$			1.0	
$I_{EBO}$	Emitter Cut-Off Current	$V_{EB} = -8\text{V}$ $I_C = 0$			2	
$h_{FE}^{(1)}$	Forward-current transfer ratio	$I_C = 1.0\text{A}$ $V_{CE} = 3\text{V}$	10		80	-
		$I_C = 5\text{A}$ $V_{CE} = 3\text{V}$	10		40	
		$T_A = -55^\circ\text{C}$	4			
$V_{CE(sat)}^{(1)}$	Collector-Emitter Saturation Voltage	$I_C = 5\text{A}$ $I_B = 1.0\text{A}$ $T_A = 125^\circ\text{C}$			1.0 2	V
		$I_C = 8\text{A}$ $I_B = 4\text{A}$			2	
$V_{BE(sat)}^{(1)}$	Base-Emitter Saturation Voltage	$I_C = 5\text{A}$ $I_B = 1.0\text{A}$			1.6	

## DYNAMIC CHARACTERISTICS

$ h_{fe} $	Magnitude of small signal short circuit forward current transfer ratio	$I_C = 200\text{mA}$ $f = 5\text{MHz}$	$V_{CE} = 10\text{V}$	2	3		-
$C_{obo}$	Output Capacitance	$V_{CB} = 10\text{V}$ $f = 1.0\text{MHz}$	$I_E = 0$			300	pF
$t_d$	Delay time	$V_{CC} = 125\text{V}$ $I_C = 5.0\text{A}$ $I_{B1} = -I_{B2} = -1.0\text{A}$				0.1	$\mu\text{s}$
$t_r$	Rise Time					0.59	
$t_s$	Storage Time					4	
$t_f$	Fall Time					0.42	

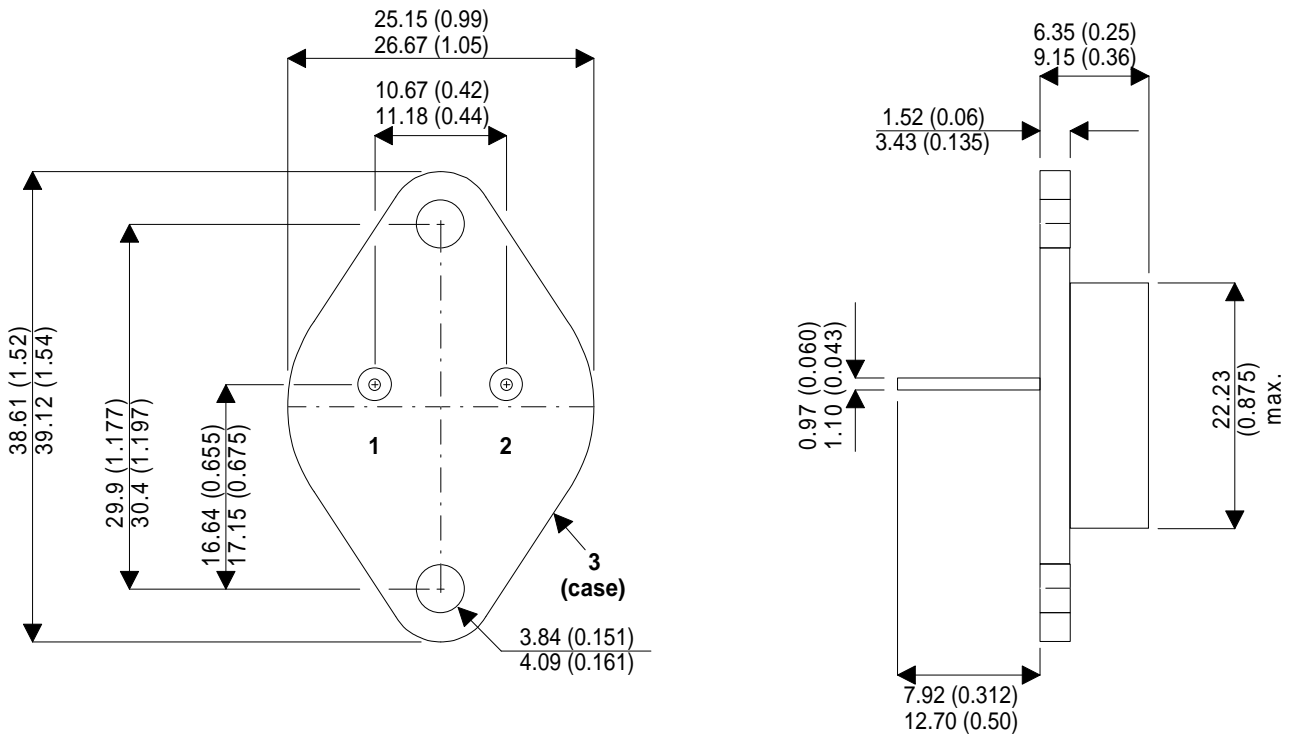
### Notes

(1) Pulse Width  $\leq 300\mu\text{s}$ ,  $\delta \leq 2\%$

# SILICON POWER NPN TRANSISTOR 2N6673

## MECHANICAL DATA

Dimensions in mm (inches)



### TO3 (TO-204AA) METAL PACKAGE Underside View

Pin 1 - Base

Pin 2 - Emitter

Case - Collector