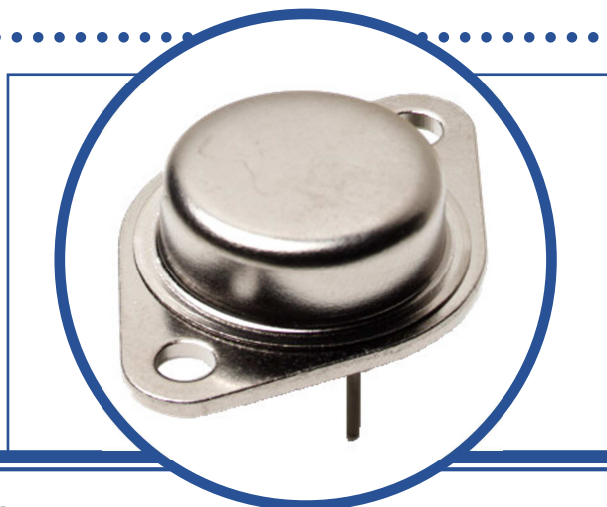


SILICON HIGH POWER NPN TRANSISTOR

2N5672

- High Current Rating
- Hermetic TO3 Metal Package.
- Designed For High Speed Switching Applications
- Screening Options Available



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

V_{CBO}	Collector – Base Voltage	150V
V_{CEO}	Collector – Emitter Voltage	120V
V_{EBO}	Emitter – Base Voltage	7.0V
I_C	Continuous Collector Current	30A
I_B	Base Current	10A
P_D	Total Power Dissipation at $T_A = 25^\circ\text{C}$	6W
	Derate Above 25°C	34mW/ $^\circ\text{C}$
P_D	Total Power Dissipation at $T_C = 25^\circ\text{C}$	140W
	Derate Above 25°C	800mW/ $^\circ\text{C}$
T_J	Junction Temperature Range	-65 to $+200^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65 to $+200^\circ\text{C}$

THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case	1.25	$^\circ\text{C/W}$

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 HIGH POWER NPN TRANSISTOR 2N5672

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	$I_C = 50\text{mA}$ $I_B = 0$	120			V
$V_{(BR)CEX}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}$ $V_{BE} = -1.5\text{V}$	150			
$V_{(BR)CER}^{(1)}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}$ $R_{BE} = 50\Omega$	140			
I_{CEX}	Collector-Emitter Cut-Off Current	$V_{CE} = 135\text{V}$ $V_{BE} = -1.5\text{V}$			10	mA
I_{CEO}	Collector-Emitter Cut-Off Current	$V_{CE} = 80\text{V}$ $I_B = 0$			10	
I_{EBO}	Emitter Cut-Off Current	$V_{EB} = 7.0\text{V}$ $I_C = 0$			10	
$h_{FE}^{(1)}$	DC Current Gain	$I_C = 20\text{A}$ $V_{CE} = 5.0\text{V}$	20			
		$I_C = 15\text{A}$ $V_{CE} = 2.0\text{V}$	20		100	
$V_{BE}^{(1)}$	Base-Emitter Voltage	$I_C = 15\text{A}$ $V_{CE} = 5.0\text{V}$			1.6	V
$V_{CE(sat)}^{(1)}$	Collector-Emitter Saturation Voltage	$I_C = 15\text{A}$ $I_B = 1.2\text{A}$			0.75	
$V_{BE(sat)}^{(1)}$	Base-Emitter Saturation Voltage	$I_C = 15\text{A}$ $I_B = 1.2\text{A}$			1.5	

DYNAMIC CHARACTERISTICS

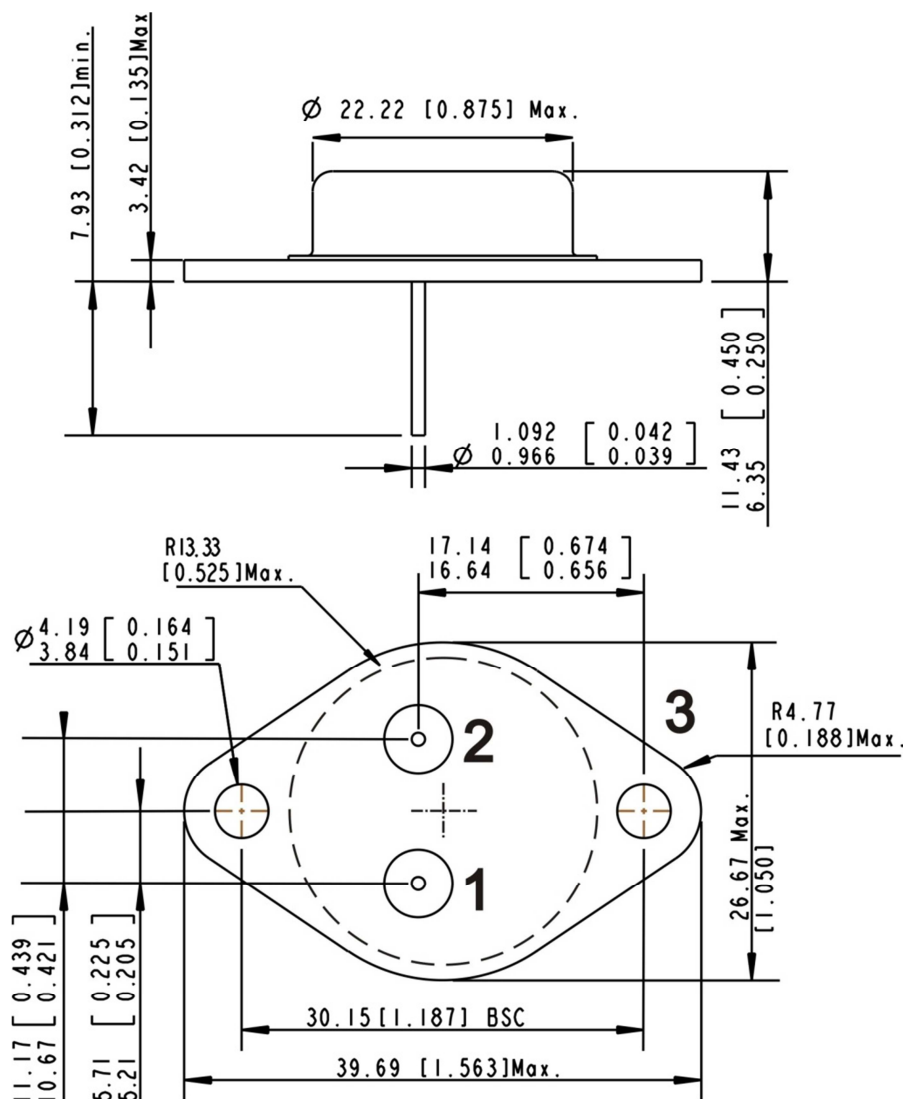
f_T	Transition Frequency	$I_C = 2.0\text{A}$ $V_{CE} = 10\text{V}$ $f = 5.0\text{MHz}$	30			MHz
C_{obo}	Output Capacitance	$V_{CB} = 10\text{V}$ $I_E = 0$ $f = 1.0\text{MHz}$			900	pF
t_{on}	Turn-on Time	$V_{CC} = 30\text{V}$ $I_C = 15\text{A}$			0.5	μs
t_{off}	Turn-off Time	$I_{B1} = -I_{B2} = 1.2\text{A}$			2.0	

Notes

(1) Pulse Width $\leq 380\mu\text{s}$, $\delta \leq 2\%$

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Dimensions in mm (inches)

**T03 (TO-204AA)**

Pin 1 - Base

Pin 2 - Emitter

Case - Collector