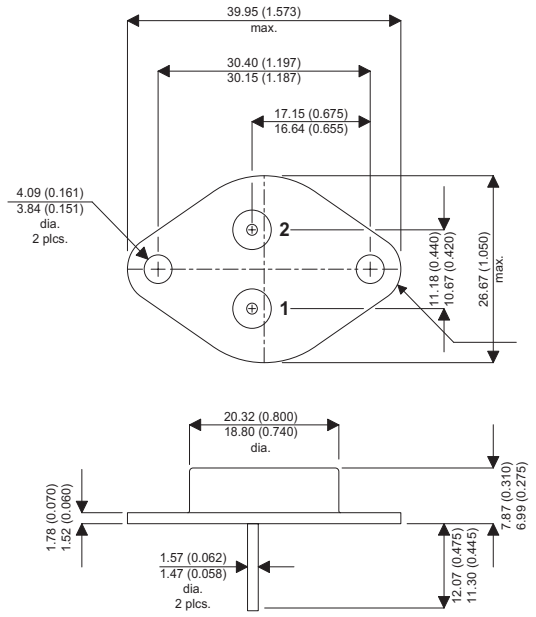
2N5672

MECHANICAL DATA

Dimensions in mm (inches)



TO-3 (TO-204AE)

Pin 1 – Base Pin 2 – Emitter Case – Collector

NPN HIGH POWER SILICON TRANSISTOR

Features

- **High Current & High Speed Switching**
- **High Reliability Screening Options Available Including:-**
  - **Semelab Space Level discrete component processing which is based on conformance & screening levels of MIL-PRF-19500 & ESCC 5000**

Applications

For high reliability general purpose applications, where high speed & high current switching and amplification is required.

ABSOLUTE MAXIMUM RATINGS

T_{CASE} = 25°C unless otherwise stated			
V_{CBO}	Collector - Base Voltage		150V
V_{CEO}	Collector - Emitter Voltage (I_B = 0)		120V
V_{EBO}	Emitter – Base Voltage (I_C = 0)		7.0V
I_C	Continuous Collector Current		30A
I_B	Base Current		10A
P_{tot}	Total Power Dissipation at	$T_{case} \leq 25°C$	140W
		$T_{amb} \leq 25°C$	6W
T_{stg}	Operating and Storage Temperature Range		-65 to +200°C
T_j	Junction Temperature		200°C

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SEME LAB

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THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction - Case	Max	1.25	°C/W

ELECTRICAL CHARACTERISTICS (T_{case}=25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CER}$ *	Collector Emitter Breakdown Voltage	I_C = 200mA	I_B = 0	120	-	-	V
$V_{(BR)CEX}$	Collector Emitter Breakdown Voltage	I_C = 200mA	V_{BE} = -1.5V	150	-	-	
$V_{(BR)CER}$	Collector Emitter Breakdown Voltage	I_C = 200mA	R_{BE} = 50	140	-	-	
I_{CEX}	Collector-Emitter Cut-Off Current	V_{CE} = 135V	V_{BE} = -1.5V	-	-	10	mA
I_{CEO}	Collector-Emitter Cut-Off Current	V_{CE} = 80V	I_B = 0A	-	-	10	
I_{EBO}	Emitter-Base Cut-Off Current	V_{EB} = 7.0V	I_C = 0	-	-	10	
h_{FE}*	DC Current Gain	I_C = 20A	V_{CE} = 5.0V	20	-	-	
		I_C = 15A	V_{CE} = 2.0V	20	-	100	
V_{BE}*	Base Emitter Voltage	I_C = 15A	V_{CE} = 5.0V	-	-	1.6	V
$V_{CE\ sat}$*	Collector-Emitter Saturation Voltage	I_C = 15A	I_B = 1.2A	-	-	0.75	
$V_{BE\ sat}$*	Base-Emitter Saturation Voltage	I_C = 15A	I_B = 1.2A	-	-	1.5	
f_T	Transition Frequency	I_C = 2A f = 5MHz	V_{CE} = 10V	50	-	-	MHz
C_{obo}	Collector Base Capacitance	I_E = 0 f = 1.0MHz	V_{CB} = 10V	-	-	900	pF
T_{on}	Switching Time	I_C = 15A V_{CC} = 30V I_{B1} = I_{B2} = 1.2A		-	-	0.5	µS
T_s	Switching Time			-	-	0.5	
T_{off}	Switching Time			-	-	1.5	

* Pulse test t_p = 300µs, δ < 2%

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