SILICON HIGH POWER NPN TRANSISTOR

TT electronics
Semelab Limited

2N5672

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

ABSOLUTE MAXIMUM RATINGS (T_C = 25°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°C	6W
		Derate Above 25°C	34mW/°C
P_D	Total Power Dissipation at	T_C = 25°C	140W
		Derate Above 25°C	800mW/°C
T_J	Junction Temperature Range		-65 to +200°C
T_{stg}	Storage Temperature Range		-65 to +200°C

THERMAL PROPERTIES

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

SEMELAB
A subsidiary of TT electronics plc.

Semelab Limited Coventry Road, Lutterworth, Leicestershire, LE17 4JB
Telephone +44 (0) 1455 556565 Fax +44 (0) 1455 552612 Email: sales@semelab-tt.com Website: http://www.semelab-tt.com

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ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
$V_{(BR)CER}$ (1)	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			
$V_{(BR)CER}$ (1)	Collector-Emitter Breakdown Voltage	I_C = 200mA R_{BE} = 50Ω	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 = 0			10	
I_{EBO}	Emitter Cut-Off Current	V_{EB} = 7.0V I_C = 0			10	
h_{FE} (1)	DC Current Gain	I_C = 20A V_{CE} = 5.0V	20			
		I_C = 15A V_{CE} = 2.0V	20		100	
V_{BE} (1)	Base-Emitter Voltage	I_C = 15A V_{CE} = 5.0V			1.6	V
$V_{CE(sat)}$ (1)	Collector-Emitter Saturation Voltage	I_C = 15A I_B = 1.2A			0.75	
$V_{BE(sat)}$ (1)	Base-Emitter Saturation Voltage	I_C = 5A I_B = 1.2A			1.5	

DYNAMIC CHARACTERISTICS

f_T	Transition Frequency	I_C = 2.0A V_{CE} = 10V f = 5.0MHz	30			MHz
C_{obo}	Output Capacitance	V_{CB} = 10V I_E = 0 f = 1.0MHz			900	pF
t_{on}	Turn-on Time	V_{CC} = 30V I_C = 15A I_{B1} = -I_{B2} = 1.2A			0.5	µs
t_s	Storage Time				0.5	
t_{off}	Turn-off Time				1.5	

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

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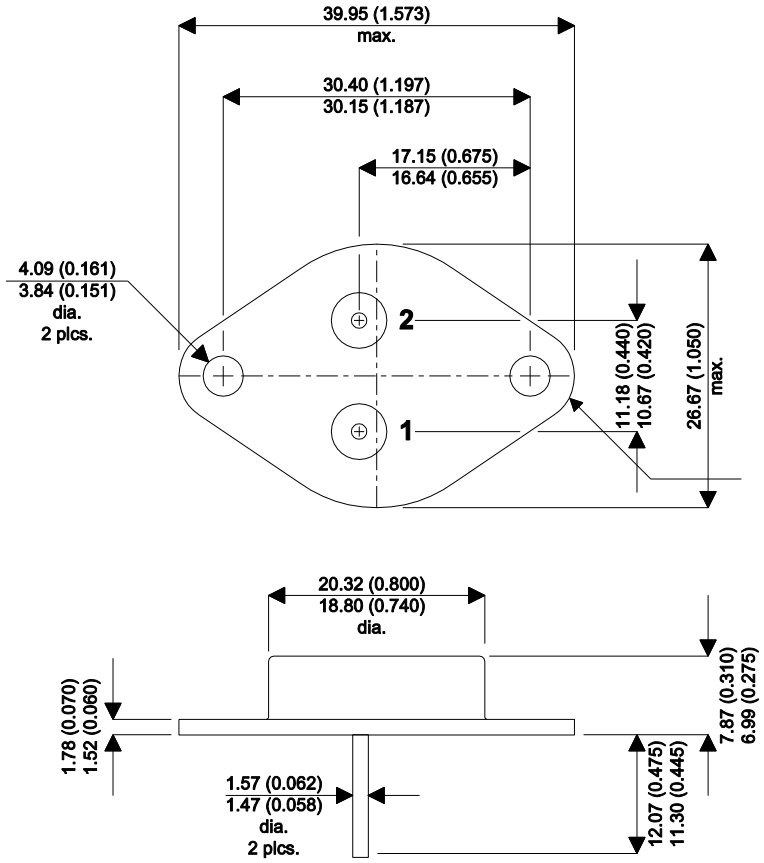
MECHANICAL DATA

Dimensions in mm (inches)



TO3 (TO-204AE)

Pin 1 - Base Pin 2 - Emitter Case - Collector