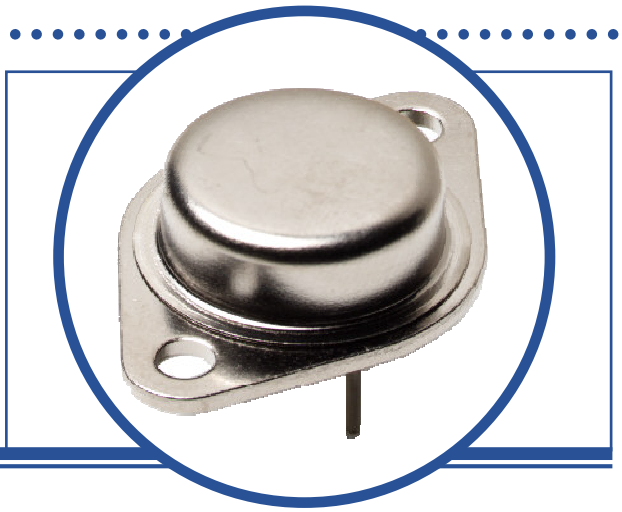
SILICON EPITAXIAL PNP TRANSISTOR

TT electronics
Semelab Limited

2N5883

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



ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage		-60V
V_{CEO}	Collector – Emitter Voltage		-60V
V_{EBO}	Emitter – Base Voltage		-5V
I_C	Continuous Collector Current		-25A
I_{CM}	Peak Collector Current		-50A
I_B	Base Current		-7.5A
P_D	Total Power Dissipation at	T_C = 25°C	200W
		Derate Above 25°C	1.14W/°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	0.875	°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
$V_{(BR)CEO}$ [1]	Collector-Emitter Breakdown Voltage	I_C = -50mA		-60			V
I_{CEV}	Collector Cut-Off Current	V_{CE} = -60V	V_{BE} = 1.5V			-1.0	mA
			T_C = 150°C			-10	
I_{CEO}	Collector Cut-Off Current	V_{CE} = -30V	I_B = 0			-2	
I_{CBO}	Collector Cut-Off Current	V_{CB} = -60V	I_E = 0			-1.0	
I_{EBO}	Emitter Cut-Off Current	V_{EB} = -5V	I_C = 0			-1.0	
h_{FE} [1]	Forward-current transfer ratio	I_C = -3A	V_{CE} = -4V	35			
		I_C = -10A	V_{CE} = -4V	20		100	
		I_C = -25A	V_{CE} = -4V	4			
V_{BE} [1]	Base-Emitter Voltage	I_C = -10A	V_{CE} = -4V			-1.5	V
$V_{CE(sat)}$ [1]	Collector-Emitter Saturation Voltage	I_C = -15A	I_B = -1.5A			-1.0	
		I_C = -25A	I_B = -6.25A			-4	
$V_{BE(sat)}$ [1]	Base-Emitter Saturation Voltage	I_C = -25A	I_B = -6.25A			-2.5	

DYNAMIC CHARACTERISTICS

f_T	Transition Frequency	I_C = -1.0A f = 1.0MHz	V_{CE} = -10V	4			MHz
C_{obo}	Output Capacitance	V_{CB} = -10V f = 1.0MHz	I_E = 0			1000	pF
t_r	Rise Time	V_{CC} = -30V I_{B1} = -I_{B2} = -1.0A	I_C = -10A			0.7	µs
t_s	Storage Time					1.0	
t_f	Fall Time					0.8	

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

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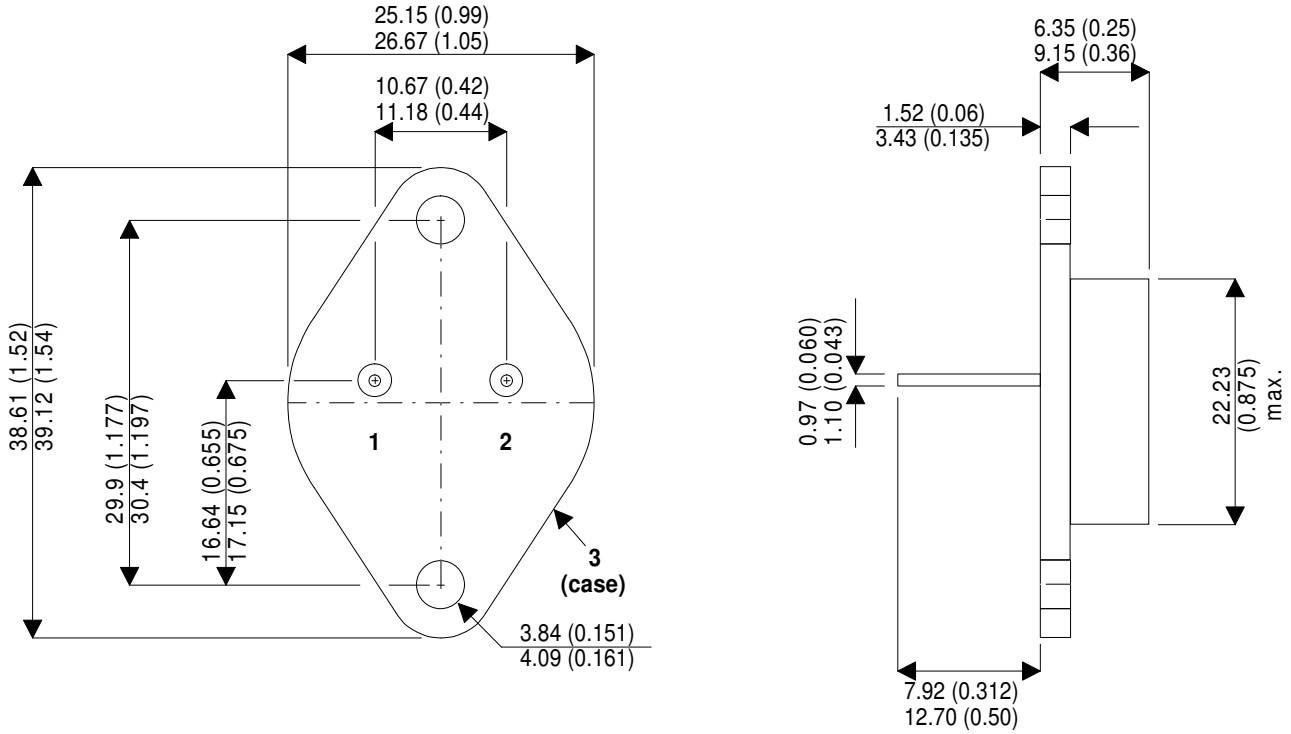
MECHANICAL DATA

Dimensions in mm (inches)



TO3 (TO-204AA) METAL PACKAGE

Underside View

Pin 1 - Base Pin 2 - Emitter Case - Collector