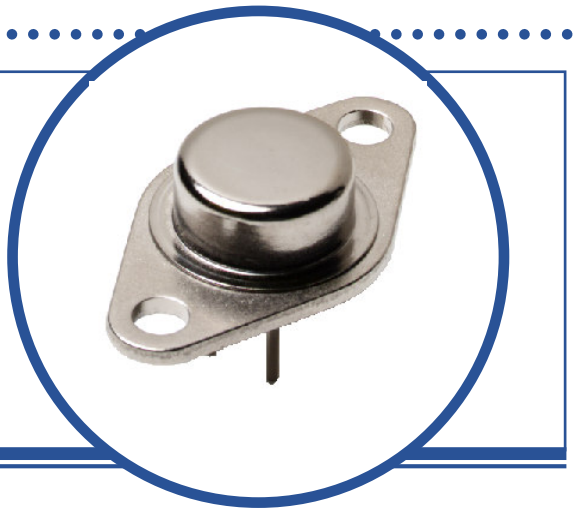
SILICON PLANAR EPITAXIAL NPN TRANSISTOR

TT electronics
Semelab Limited

BUX77

- High Power
- Hermetic TO-66 Metal Package
- Ideally suited for Driver Circuits, Switching and Amplifier Applications
- Screening Options Available



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

V_{CBO}	Collector – Base Voltage		100V
V_{CEO}	Collector – Emitter Voltage		80V
V_{EBO}	Emitter – Base Voltage		6V
I_C	Continuous Collector Current		5A
I_B	Base Current		0.8A
P_D	Total Power Dissipation at	T_C = 25°C	40W
		Derate Above 25°C	0.23W/°C
T_J	Junction Temperature Range		-65 to +200°C
T_{stg}	Storage Temperature Range		-65 to +200°C

THERMAL PROPERTIES

Symbols	Parameters	Min.	Typ.	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case			4.4	°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.

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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	I_B = 0	80			V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	I_C = 2mA	V_{BE} = 0	100			
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 1.0mA	I_C = 0	6			
I_{CEO}	Collector Cut-Off Current	V_{CE} = 60V	I_B = 0			10	µA
I_{CBO}	Collector Cut-Off Current	V_{CB} = 80V	I_E = 0			0.5	
			T_C = 150°C			150	
I_{EBO}	Emitter Cut-Off Current	V_{EB} = 4V	I_C = 0			0.5	
h_{FE} [1]	Forward-current transfer ratio	I_C = 0.5A	V_{CE} = 5V	50			
		I_C = 2A	V_{CE} = 5V	50		120	
		I_C = 5A	V_{CE} = 5V	30			
		I_C = 1.0A	V_{CE} = 5V T_C = -40°C	25			
$V_{CE(sat)}$ [1]	Collector-Emitter Saturation Voltage	I_C = 5A	I_B = 0.5A			1.0	V
$V_{BE(sat)}$ [1]	Base-Emitter Saturation Voltage	I_C = 5A	I_B = 0.5A			1.3	

DYNAMIC CHARACTERISTICS

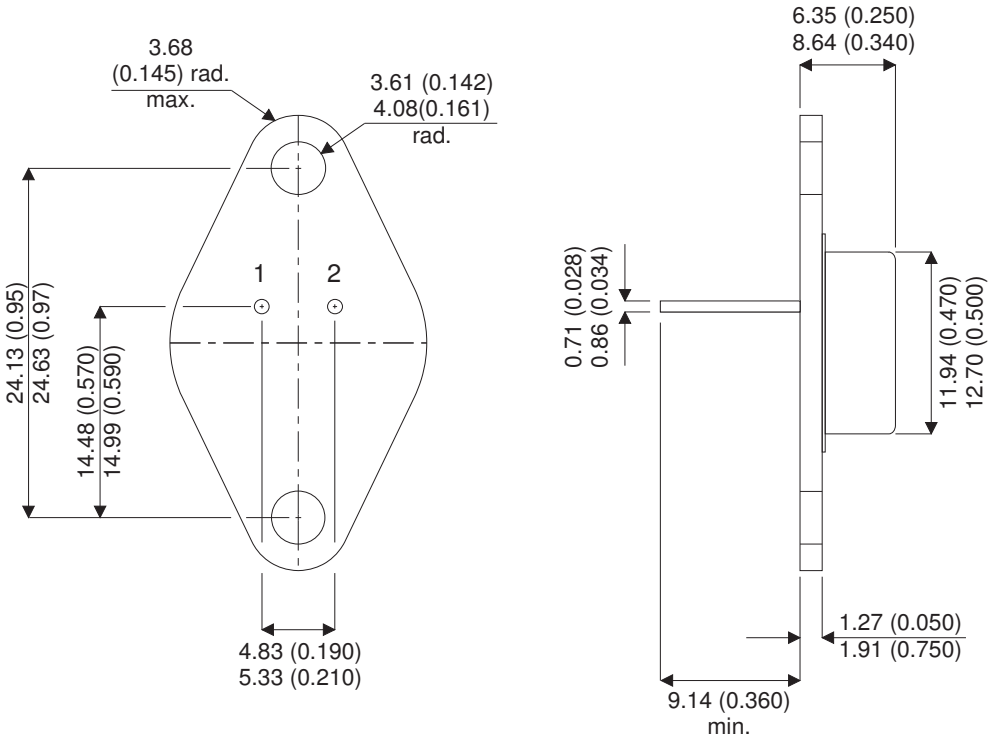
$\|h_{fe}\|$	Small signal forward-current transfer ratio	I_C = 0.5A f = 20MHz	V_{CE} = 5V	1.5			
t_{on}	Turn-On Time	I_C = 5A I_{B1} = 0.5A	V_{CC} = 40V		0.3	0.4	µs
t_{off}	Turn-Off Time	I_C = 5A I_{B1} = - I_{B2} = 0.5A	V_{CC} = 40V		1.1	2.5	

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

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MECHANICAL DATA

Dimensions in mm (inches)



TO66 (TO-213AA)

Pin 1 - Base Pin 2 - Emitter Case - Collector