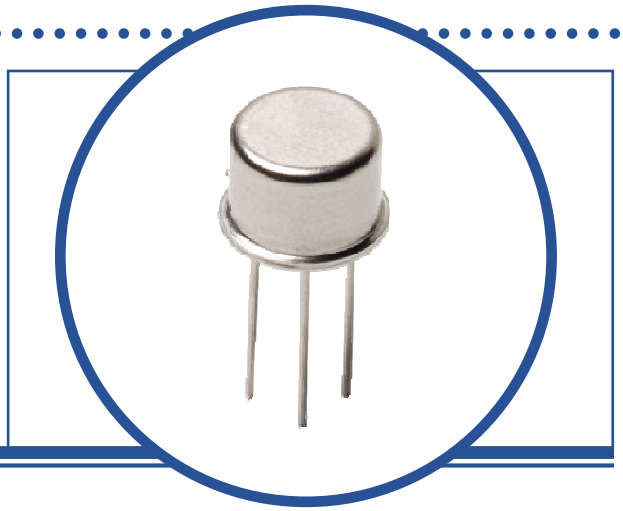
SILICON PNP TRANSISTOR

TT electronics
Semelab Limited

2N3634

- General Purpose PNP Silicon Transistor
- High Voltage, High Speed Saturated Switching
- Low Power Amplifier Applications
- Hermetic TO39 Package
- Screening Options Available



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

V_{CBO}	Collector – Base Voltage		-140V
V_{CEO}	Collector – Emitter Voltage		-140V
V_{EBO}	Emitter – Base Voltage		-5.0V
I_C	Continuous Collector Current		-1.0A
P_D	Total Power Dissipation at	T_A = 25°C	1.0W
		Derate Above 25°C	5.71mW/°C
		T_C = 25°C	5.0W
		Derate Above 25°C	28.6mW/°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.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction To Ambient			175	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction To Case			35	°C/W

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

Symbols	Parameters	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CEO}$ (1)	Collector-Emitter Breakdown Voltage	I_C = -10mA	I_B = 0	-140			V
I_{EBO}	Emitter Cut-Off Current	V_{BE} = -5.0V	I_C = 0			-10	µA
		V_{BE} = -3.0V	I_C = 0			-50	nA
I_{CBO}	Collector Cut-Off Current	V_{CB} = -100V	I_E = 0			-100	
			T_A = 150°C			-10	µA
		V_{CB} = -140V	I_E = 0			-10	
I_{CEO}	Collector-Emitter Cut-off Current	V_{CE} = -100V				-10	
h_{FE} (1)	DC Current Gain	I_C = -0.10mA	V_{CE} = -10V	25			
		I_C = -1.0mA	V_{CE} = -10V	45			
		I_C = -10mA	V_{CE} = -10V	50			
		I_C = -50mA	V_{CE} = -10V	50		160	
			T_A = -55°C	25			
		I_C = -150mA	V_{CE} = -10V	30			
$V_{CE(sat)}$ (1)	Collector-Emitter Saturation Voltage	I_C = -10mA	I_B = -1.0mA			-0.3	V
		I_C = -50mA	I_B = -5.0mA			-0.6	
$V_{BE(sat)}$ (1)	Base-Emitter Saturation Voltage	I_C = -10mA	I_B = -1.0mA			-0.8	
		I_C = -50mA	I_B = -5.0mA	-0.65		-0.9	

DYNAMIC CHARACTERISTICS

f_T	Transition Frequency	I_C = -30mA f = 100MHz	V_{CE} = -30V	150			MHz
h_{fe}	Small-Signal Current Gain	I_C = -10mA f = 1.0KHz	V_{CE} = -10V	40		160	
C_{obo}	Output Capacitance	V_{CB} = -20V f = 1.0MHz	I_E = 0			10	pF
C_{ibo}	Input Capacitance	V_{EB} = -1.0V f = 1.0MHz	I_C = 0			75	pF
t_{on}	Turn-On Time	V_{CC} = -100V	V_{BE} = 4.0V			400	ns
t_{off}	Turn-Off Time	I_C = -50mA	I_{B1} = -I_{B2} = -5mA			600	

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

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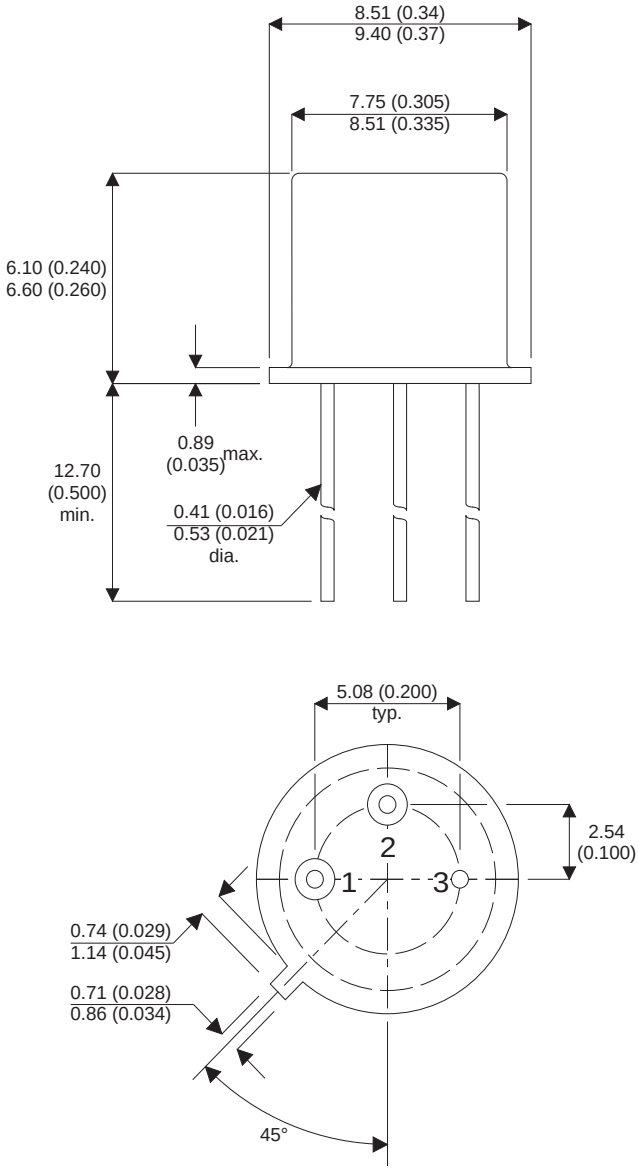
MECHANICAL DATA
Dimensions in mm (inches)



TO39 (TO-205AD) METAL PACKAGE

Underside View

PIN 1 - Emitter PIN 2 - Base PIN 3 - Collector