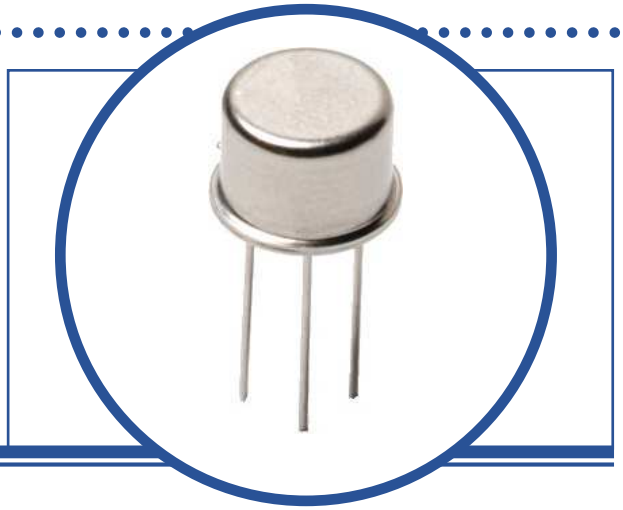
HIGH CURRENT GENERAL PURPOSE TRANSISTOR

TT electronics
Semelab Limited

BFX34

- Silicon Epitaxial NPN Transistor
- High Speed, Low Saturation Switch
- Hermetic TO39 Package
- Screening Options Available



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

V_{CBO}	Collector – Base Voltage		120V
V_{CEO}	Collector – Emitter Voltage		60V
V_{EBO}	Emitter – Base Voltage		6V
I_B	Continuous Base Current		1.0A
I_C	Continuous Collector Current		2A
I_{CM}	Peak Repetitive Collector Current		5A
P_D	Total Power Dissipation at	T_A = 25°C	870mW
		T_C = 25°C	5W
T_J	Junction Temperature Range		200°C
T_{stg}	Storage Temperature Range		-65 to +200°C

THERMAL PROPERTIES

Symbols	Parameters	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction To Ambient	200	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction To Case	35	°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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HIGH CURRENT GENERAL PURPOSE TRANSISTOR BFX34

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

Symbols	Parameters	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CBO}$ (1)	Collector-Base Breakdown Voltage	I_C = 5mA	V_{BE} = 0	120			V
$V_{(BR)CEO}$ (1)	Collector-Emitter Breakdown Voltage	I_C = 10mA	I_B = 0	60			
V_{EBO} (1)	Emitter - Base Voltage	I_E = 1.0mA	I_C = 0	6			
$V_{CE(sat)}$ (1)	Collector-Emitter Saturation Voltage	I_C = 5A	I_B = 0.5A		0.4	1.0	
$V_{BE(sat)}$ (1)	Base-Emitter Saturation Voltage				1.3	1.6	
I_{CES}	Collector Cut-Off Current	V_{CE} = 60V	V_{BE} = 0		0.02	10	µA
I_{EBO}	Emitter Cut-Off Current	V_{EB} = 4V	I_C = 0		0.05	10	
h_{FE}	DC Current Gain	I_C = 1.0A	V_{CE} = 2V		100		-
		I_C = 1.5A	V_{CE} = 0.6V		75		
		I_C = 2A	V_{CE} = 2V	40	80	150	

DYNAMIC CHARACTERISTICS

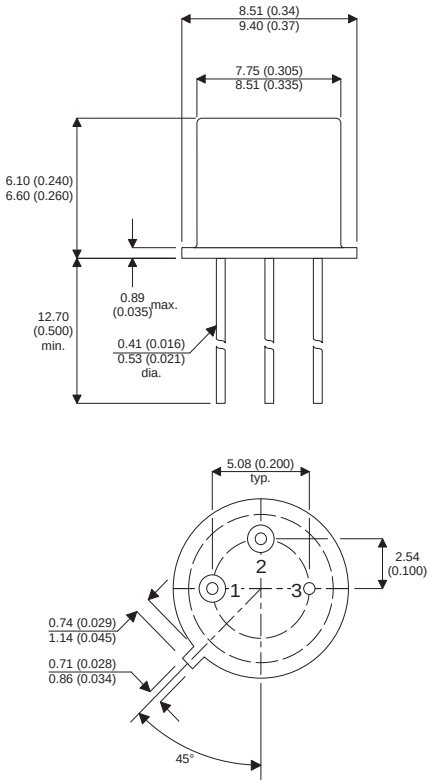
f_T	Transition Frequency	I_C = 0.5A f = 20MHz	V_{CE} = 5V	70	100		MHz
C_{obo}	Output Capacitance	V_{CB} = 10V	f = 1.0MHz		40	100	pF
C_{ibo}	Input Capacitance	V_{EB} = 0.5V	f = 1.0MHz		300	500	
t_{on}	Turn on Time	V_{CC} = 20V	I_C = 0.5A			0.6	µS
t_{off}	Turn off Time	I_{B1}= -I_{B2} = 50mA				1.2	

Notes
(1) Pulse Width ≤ 300us, δ ≤ 2%

HIGH CURRENT GENERAL PURPOSE TRANSISTOR BFX34

MECHANICAL DATA

Dimensions in mm (inches)



TO39 (TO-205AD) METAL PACKAGE

Underside View

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