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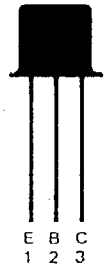
BFX34

NPN HIGH CURRENT GENERAL PURPOSE POWER

DIFFUSED SILICON PLANAR* EPITAXIAL TRANSISTOR

- V_{CEO} . . . 60 V (MIN)
- h_{FE} . . . 40-150 @ I_C = 2.0 A

See TO5-1 Package Outline



ABSOLUTE MAXIMUM RATINGS (Note 1)

Maximum Temperatures		
Storage Temperature		−55°C to +200°C
Operating Junction Temperature		200°C
Maximum Power Dissipation (Notes 2 & 3)		
Total Dissipation at 25°C Case Temperature		5.0 W
at 25°C Ambient Temperature		0.87 W
Maximum Voltages		
V_{CBO}	Collector to Base Voltage	120 V
V_{CEO}	Collector to Emitter Voltage (Note 4)	60 V
V_{EBO}	Emitter to Base Voltage	6.0 V

ELECTRICAL CHARACTERISTICS (25°C Case Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
h_{FE}	DC Pulse Current Gain		100			I_C = 1.0 A, V_{CE} = 2.0 V
	(Note 5)		75			I_C = 1.5 A, V_{CE} = 0.6 V
		40	80	150		I_C = 2.0 A, V_{CE} = 2.0 V
$V_{BE(sat)}$	Base Saturation Voltage (Note 5)		1.3	1.6	V	I_C = 5.0 V, I_B = 0.5 A
$V_{CE(sat)}$	Collector Saturation Voltage (Note 5)		0.4	1.0	V	I_C = 5.0 A, I_B = 0.5 A
I_{CES}	Collector Reverse Current		0.02	10	μA	V_{CE} = 60 V, V_{BE} = 0
I_{EBO}	Emitter Cutoff Current		0.05	10	μA	I_C = 0, V_{EB} = 4.0 V
BV_{CBO}	Collector to Base Breakdown Voltage	120			V	I_C = 5.0 mA, I_E = 0
BV_{EBO}	Emitter to Base Breakdown Voltage	6.0			V	I_E = 1.0 mA, I_C = 0
$V_{CEO(sus)}$	Collector to Emitter Sustaining Voltage (Notes 4 & 5)	60			V	I_C = 100 mA, I_B = 0
h_{fe}	High Frequency Current Gain	3.5	5.0			I_C = 0.5 A, V_{CE} = 5.0 V, f = 20 MHz
C_{ob}	Output Capacitance		40	100	pF	I_E = 0, V_{CB} = 10 V
C_{TE}	Emitter Transition Capacitance		300	400	pF	I_C = 0, V_{EB} = 0.5 V
t_{on}	Turn On Time		0.25	0.6	μs	I_C = 5.0 A, I_{B1} = 5.0 A
t_{off}	Turn Off Time		0.6	1.2	μs	I_C = 5.0 A, I_{B1} = I_{B2} = 0.5 A