

NPN SILICON SWITCHING TRANSISTOR

DESCRIPTION:

The **ASI BFX34** is Designed for General Purpose Medium Power Switching and Amplifier applications.

MAXIMUM RATINGS

I_C	5.0 A
V_{CBO}	120 V
V_{CEO}	60 V
P_{DISS}	5.0 W @ $T_A = 25\text{ }^\circ\text{C}$
T_J	-65 to +200 $^\circ\text{C}$
T_{STG}	-65 to +200 $^\circ\text{C}$
θ_{JC}	35 $^\circ\text{C/W}$

PACKAGE STYLE TO-39				
SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
ϕa	0.190	0.210	4.83	5.33
A	0.240	0.260	6.10	6.60
ϕb	0.016	0.021	0.406	0.533
ϕb_2	0.016	0.019	0.406	0.483
ϕD	0.350	0.370	8.89	9.40
ϕD_1	0.315	0.335	8.00	8.51
h	0.009	0.125	0.229	3.18
j	0.028	0.034	0.711	0.864
k	0.029	0.040	0.737	1.02
l	0.500		12.70	
l_1		0.050		1.27
l_2	0.250		6.35	
P	0.100		2.54	
Q				
a	45° NOMINAL			
β	90° NOMINAL			

1 = Emitter 2 = Base
3 = Collector

ELECTRICAL CHARACTERISTICS $T_A = 25\text{ }^\circ\text{C}$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 100\text{ mA}$	60			V
BV_{CBO}	$I_C = 5.0\text{ mA}$	120			V
BV_{EBO}	$I_E = 1.0\text{ mA}$	6.0			V
I_{CES}	$V_{CE} = 60\text{ V}$			0.02	μA
I_{EBO}	$V_{EB} = 4.0\text{ V}$			10	μA
h_{FE}	$V_{CE} = 2.0\text{ V}$ $I_C = 1.0\text{ A}$		100		---
	$V_{CE} = 0.6\text{ V}$ $I_C = 2.0\text{ A}$		75		
	$V_{CE} = 2.0\text{ V}$ $I_C = 2.0\text{ A}$	40	80	150	
$V_{CE(SAT)}$	$I_C = 5.0\text{ A}$ $I_B = 500\text{ mA}$			1.0	V
$V_{BE(SAT)}$	$I_C = 5.0\text{ A}$ $I_B = 500\text{ mA}$			1.6	V

DYNAMIC ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
f_t	$V_{CE} = 5.0\text{ V}$ $I_C = 500\text{ mA}$ $f = 20\text{ MHz}$	70			MHz
C_{EBO}	$V_{EB} = 0.5\text{ V}$ $f = 1.0\text{ MHz}$			500	pF
C_{CBO}	$V_{CB} = 10\text{ V}$ $f = 1.0\text{ MHz}$			100	pF
t_{on} t_{off}	$V_{CC} = 20\text{ V}$ $I_C = 0.5\text{ A}$ $I_{B1} = -I_{B2} = 500\text{ mA}$			0.25 1.2	μS