



Micro Commercial Components
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BFS17

NPN

Transistor
25 mA 15 Volts
300 mWatts

Features

- NPN transistor in a plastic SOT-23 package.
- A wide range of RF applications such as:
Mixers and oscillators in TV tuners
RF communications equipment.
- Marking Code: E1P

Maximum Ratings @ 25°C Unless Otherwise Noted

Symbol	Rating	Value	Unit
V_{CEQ}	Collector-Emitter Voltage	15	V
V_{CBO}	Collector-Base Voltage	25	V
V_{EBO}	Emitter-Base Voltage	2.5	V
I_C	DC Collector Current	25	mA
I_{CM}	Peak Collector Current	50	mA
P_{tot}	Total Power Dissipation up to $T_S = 70^\circ C^*$	300	mW
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55~+150	$^\circ C$

Thermal Characteristics

Symbol	Characteristic	Value	Unit
R_{th-j-s}	Thermal Resistance, Junction to Soldering Point (up to $T_S = 70^\circ C^*$)	260	K/W

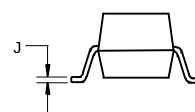
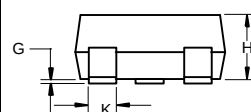
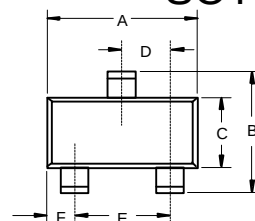
Electrical Characteristics @ 25°C Unless Otherwise Noted

Symbol	Characteristic	Min	Typ	Max	Unit
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Off Characteristics

I_{CBO}	Collector Cutoff Current ($V_{CB}=10V, I_E=0$)	---	---	10	nA
h_{FE}	DC Current Gain ($I_C=2.0mA, V_{CE}=1.0Vdc$) ($I_C=25mA, V_{CE}=1.0Vdc$)	25 25	90 90	---	---
f_T	Transition Frequency ($I_C=100\mu A, V_{CE}=1.5Vdc$, $f=200MHz$)	---	1.0	---	GHz
C_C	Collector Capacitance ($I_E=0, V_{CB}=10Vdc, f=1.0MHz$)	---	0.8	1.5	pF
C_E	Emitter Capacitance ($I_C=0, V_{EB}=0.5V, f=1.0MHz$)	---	---	2.0	pF
C_{RE}	Feedback Capacitance ($I_C=1.0mA, V_{CE}=5.0V, f=1.0MHz$)	---	0.65	---	pF
NF	Noise Figure ($I_C=2.0mA, V_{CE}=5.0V$, $R_s=50\Omega, f=1.0MHz$)	---	4.5	---	dB

SOT-23



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

