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FAIRCHILD
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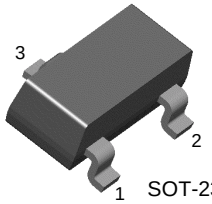
FJV1845

Amplifier Transistor

- Complement to FJV992



SOT-23

1. Base 2. Emitter 3. Collector

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	50	mA
I_B	Base Current	10	mA
P_C	Collector Dissipation	300	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

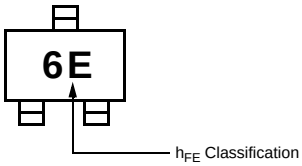
Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB}=120V, I_E=0			50	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}=5V, I_C=0			50	nA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE}=6V, I_C=0.1mA V_{CE}=6V, I_C=1mA	150 200	580 600	 1200	
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}=6V, I_C=1mA	0.55	0.59	0.65	V
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=10mA, I_B=1mA		0.07	0.3	V
f_T	Current Gain Bandwidth Product	V_{CE}=6V, I_C=1mA	50	110		MHz
C_{ob}	Output Capacitance	V_{CB}=30V, I_E=0, f=1MHz		1.6	2.5	pF

h_{FE2} Classification

Classification	P	F	E	U
h_{FE2}	200 ~ 400	300 ~ 600	400 ~ 800	600 ~ 1200

Marking



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Typical Characteristics

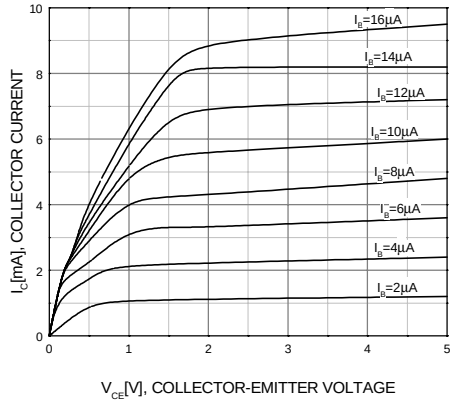

Figure 1. Static Characteristic

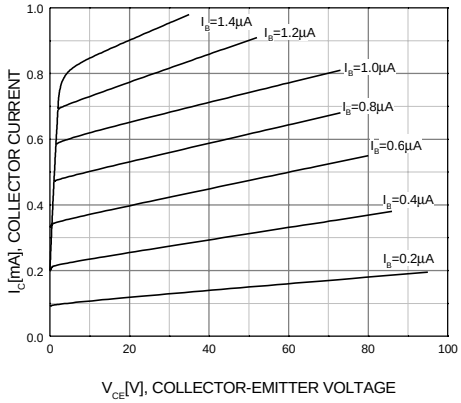

Figure 2. Static Characteristic

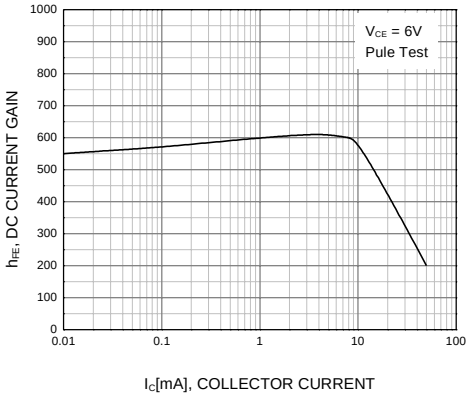

Figure 3. DC current Gain

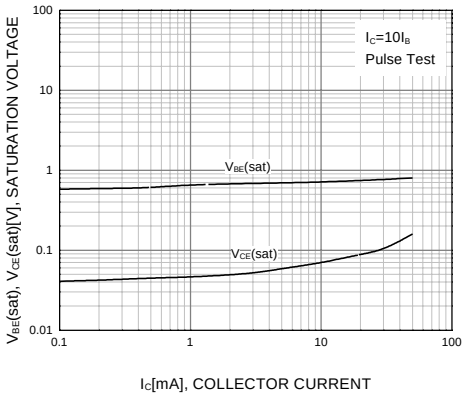

Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

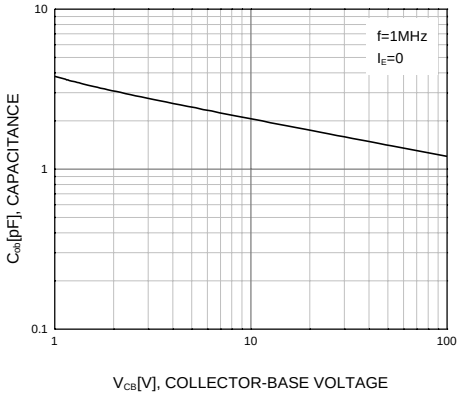

Figure 5. Collector Output Capacitance

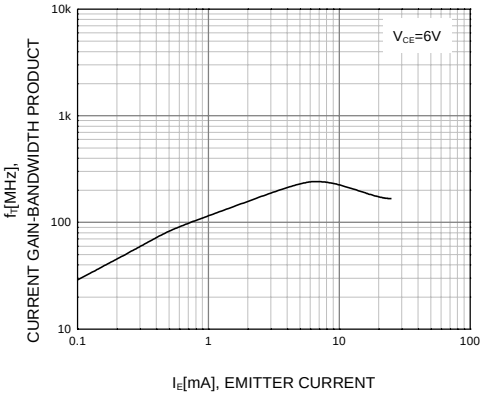

Figure 6. Current Gain Bandwidth Product

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Typical Characteristics (Continued)

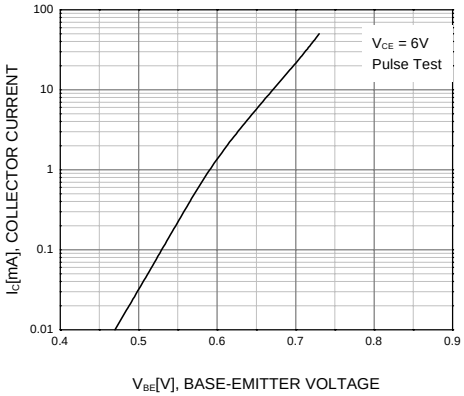

Figure 7. Collector Current vs. Base-Emitter Voltage

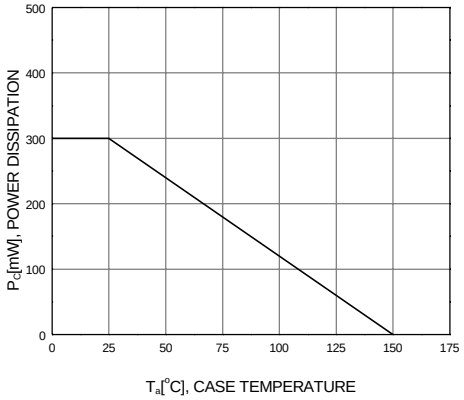

Figure 8. Power Derating

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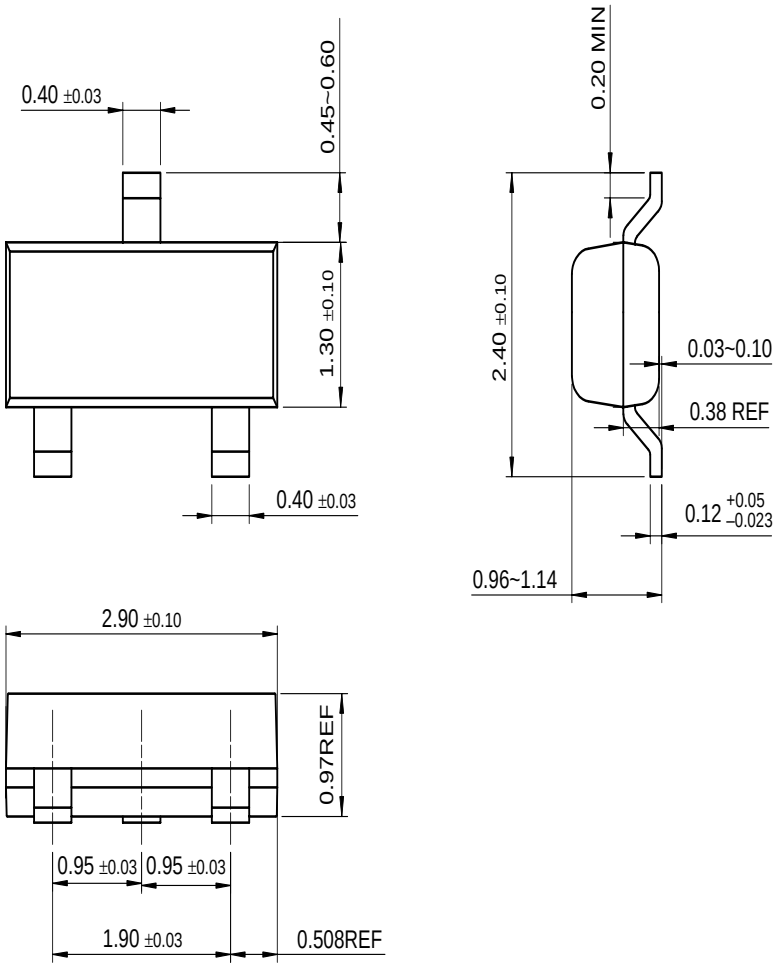
Package Dimensions

SOT-23



Dimensions in Millimeters

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