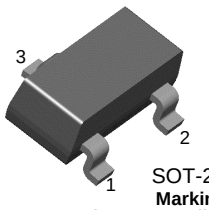
FAIRCHILD SEMICONDUCTOR®

January 2005

BCX20

NPN Epitaxial Silicon Transistor

Switching and Amplifier Applications



SOT-23
Marking: U2

1. Base 2. Emitter 3. Collector

Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	800	A
P_C	Collector Dissipation	310	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-65 ~ 150	°C

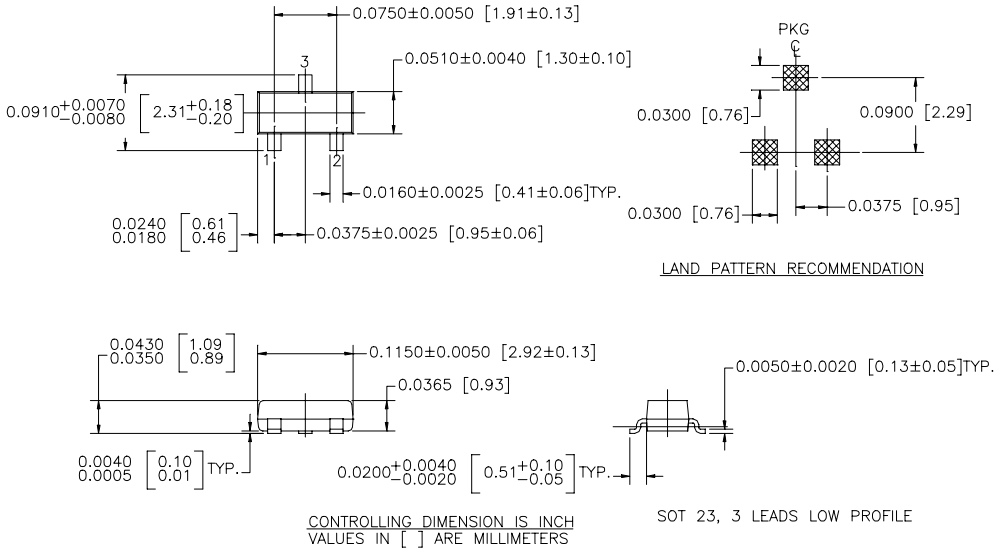
Electrical Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10mA, I_B = 0	25		V
BV_{CES}	Collector-Emitter Breakdown Voltage	I_C = 100μA, V_{BE} = 0	30		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 10μA, I_C = 0	5		V
I_{CBO}	Collector Cut-off Current	V_{CE} = 20V, V_{BE} = 0		100	nA
I_{EBO}	Emitter-Base Cut-off Current	V_{BE} =5V, I_C = 0		10	nA
h_{FE1} h_{FE2} h_{FE3}	DC Current Gain	V_{CE} = 1V, I_C = 100mA V_{CE} = 1V, I_C = 300mA V_{CE} = 1V, I_C = 500mA	100 70 40	600	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 500mA, I_B = 50mA		0.62	V
$V_{BE(on)}$	Base-Emitter Saturation Voltage	V_{CE} = 1A, I_B = 500mA		1.2	V

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Mechanical Dimensions

SOT-23



NOTE : UNLESS OTHERWISE SPECIFIED

1. STANDARD LEAD FINISH 150 MICROINCHES / 3.81 MICROMETERS MINIMUM TIN / LEAD (SOLDER) ON ALLOY 42
2. REFERENCE JEDEC REGISTRATION TO−236, VARIATION AB, ISSUE G, DATED JUL 1993

Dimensions in Millimeters

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FACT™	ImpliedDisconnect™	OCX™	RapidConfigure™	TruTranslation™
FACT Quiet Series™		OCXPro™	RapidConnect™	UHC™
Across the board. Around the world.™		OPTOLOGIC®	µSerDes™	UltraFET®
The Power Franchise®		OPTOPLANAR™	SILENT SWITCHER®	UniFET™
Programmable Active Droop™		PACMAN™	SMART START™	VCX™

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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