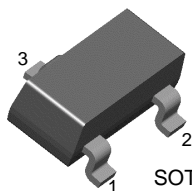


# BCX20

## NPN Epitaxial Silicon Transistor

### Switching and Amplifier Applications



SOT-23  
Marking: U2  
1. Base 2. Emitter 3. Collector

### Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ unless otherwise noted

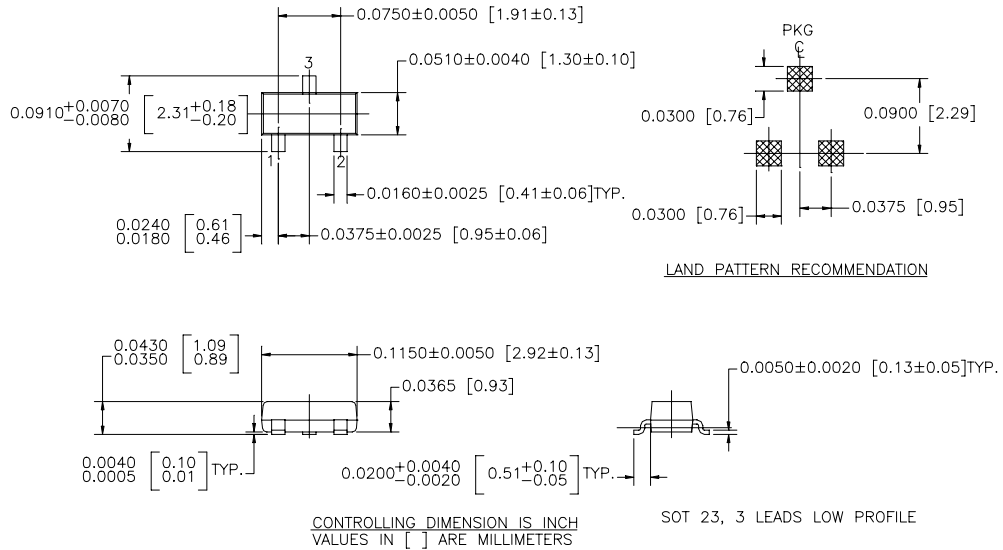
Symbol	Parameter	Value	Units
$V_{CES}$	Collector-Emitter Voltage	30	V
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current (DC)	800	A
$P_C$	Collector Dissipation	310	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-65 ~ 150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

### Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

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

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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CROSSVOLT™	GlobalOptoisolator™	MicroFET™	PowerTrench®	SuperSOT™-6
DOMET™	GTO™	MicroPak™	QFET®	SuperSOT™-8
EcoSPARK™	HiSeC™	MICROWIRE™	QS™	SyncFET™
E <sup>2</sup> CMOS™	ꝑC™	MSX™	QT Optoelectronics™	TinyLogic®
EnSigna™	i-Lo™	MSXPro™	Quiet Series™	TINYOPTO™
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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### Definition of Terms

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.