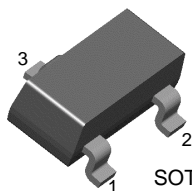


# BCX20

## 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

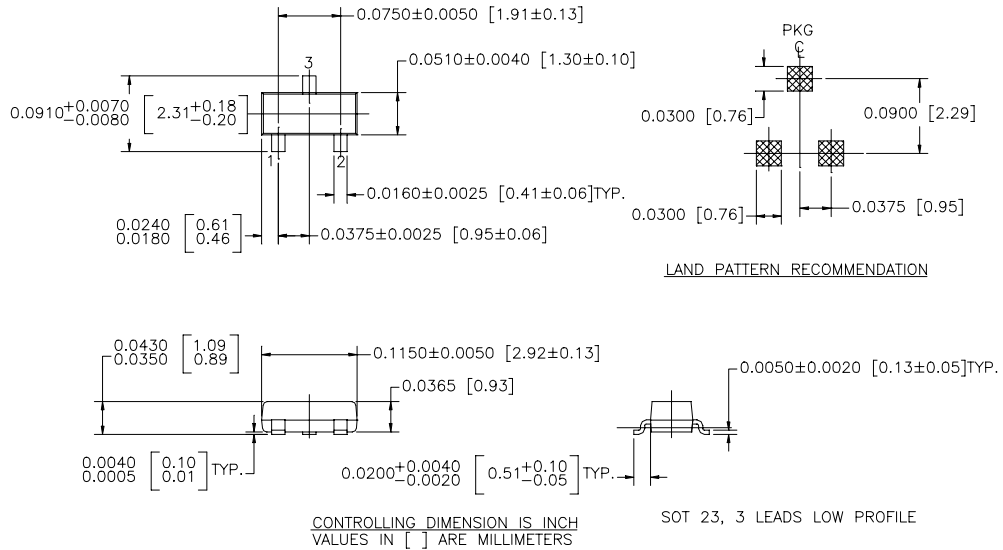
Symbol	Parameter	Value	Units
$V_{CES}$	Collector-Emitter Voltage	30	V
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current (DC)	800	A
$P_C$	Collector Dissipation	310	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-65 ~ 150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

### 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
$h_{FE1}$	DC Current Gain	$V_{CE} = 1\text{V}$ , $I_C = 100\text{mA}$	100	600	
$h_{FE2}$		$V_{CE} = 1\text{V}$ , $I_C = 300\text{mA}$	70		
$h_{FE3}$		$V_{CE} = 1\text{V}$ , $I_C = 500\text{mA}$	40		
$V_{CE(sat)}$	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> C MOS™	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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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.
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