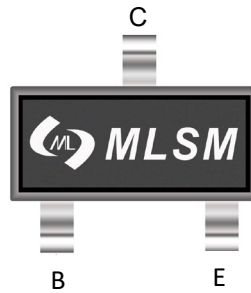
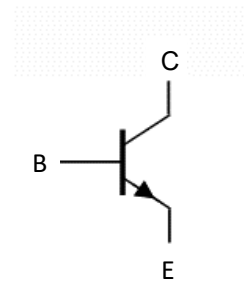


Features

- Low current
- Low voltage



SOT-23 top view



Schematic diagram

BCX70J:AJ	BCX70K:AK

Marking and pin assignment



Pb-Free



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	45	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	200	mA
P_C	Collector Power Dissipation	250	mW
T_J, T_{STG}	Operating and Storage Temperature Range	-55~ +150	$^{\circ}\text{C}$

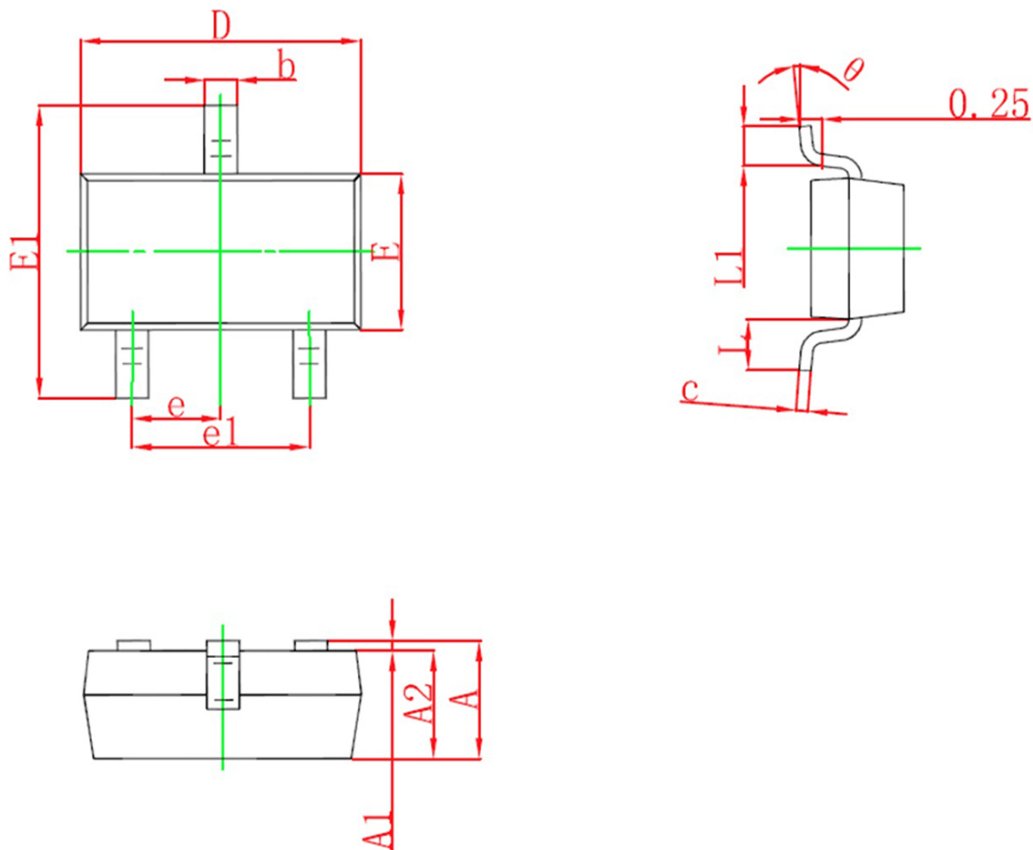
ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu A, I_E=0$	45	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=2mA, I_B=0$	45	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\mu A, I_C=0$	5	--	--	V
I_{ces}	Collector cut-off current	$V_{CE}=45V, V_{BE}=0$	--	--	20	nA
h_{FE1}	DC current gain BCX70J	$V_{CE}=5V, I_C=10\mu A$	30	--	--	
h_{FE2}		$V_{CE}=5V, I_C=2mA$	250	--	460	
h_{FE3}		$V_{CE}=1V, I_C=50mA$	90	--	--	
h_{FE1}	DC current gain BCX70K	$V_{CE}=5V, I_C=10\mu A$	100	--	--	
h_{FE2}		$V_{CE}=5V, I_C=2mA$	380	--	630	
h_{FE3}		$V_{CE}=1V, I_C=50mA$	100	--	--	
$V_{CE(sat)1}$	Collector-emitter saturation voltage	$I_C=10mA, I_B=0.25mA$	0.05	--	0.35	V
$V_{CE(sat)2}$		$I_C=50mA, I_B=1.25mA$	0.1	--	0.55	V
$V_{BE(sat)1}$	Base-emitter saturation voltage	$I_C=10mA, I_B=0.25mA$	0.6	--	0.85	V
$V_{BE(sat)2}$		$I_C=50mA, I_B=1.25mA$	0.7	--	1.05	V
V_{BE}	Base-emitter voltage	$V_{CE}=5V, I_C=2mA$	0.55	--	0.75	V
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$	--	1.7	--	pF
NF	Noise Figure	$V_{CE}=5V, I_C=200\mu A, f=1kHz, BW=200Hz, RS=2k\Omega$	--	--	6	dB
f_T	Gain-Bandwidth Product	$V_{CE}=5V, I_C=10mA, f=100MHz$	100	250	--	MHz

Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BCX70J	SOT-23	AJ	3,000	45,000	180,000	7"reel
BCX70K	SOT-23	AK	3,000	45,000	180,000	7"reel

SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°