

BCX70J

NPN EPITAXIAL SILICON TRANSISTOR

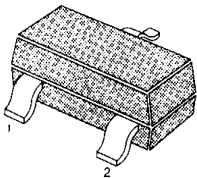
GENERAL PURPOSE TRANSISTOR

ABSOLUTE MAXIMUM RATINGS (T_A=25 °C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CBO}	45	V
Collector-Emitter Voltage	V _{CEO}	45	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	200	mA
Collector Dissipation	P _C	350	mW
Storage Temperature	T _{STG}	150	°C

• Refer to KS3904 for graphs

SOT-23



1. Base 2. Emitter 3. Collector

ELECTRICAL CHARACTERISTICS (T_A=25 °C)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =2.0mA, I _B =0	45		V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =1.0μA, I _C =0	5		V
Collector Cut-off Current	I _{CES}	V _{CE} =32V, V _{BE} =0		20	nA
Emitter Cut-off Current	I _{EBO}	V _{EB} =4V, I _C =0		20	nA
DC Current Gain	h _{FE}	V _{CE} =5V, I _C =10μA	40		
		V _{CE} =5V, I _C =2.0mA	250	460	
		V _{CE} =1V, I _C =50mA	90		
Collector-Emitter Saturation Voltage	V _{CE} (sat)	I _C =10mA, I _B =0.25mA		0.35	V
		I _C =50mA, I _B =1.25mA		0.55	V
Base-Emitter Saturation Voltage	V _{BE} (sat)	I _C =10mA, I _B =0.25mA	0.6	0.85	V
		I _C =50mA, I _B =1.25mA	0.7	1.05	V
Base-Emitter On Voltage	V _{BE} (on)	I _C =2.0mA, V _{CE} =5V	0.55	0.75	V
Current Gain Bandwidth Product	f _T	I _C =10mA, V _{CE} =5V	125		MHz
Output Capacitance	C _{OB}	V _{CB} =10V, I _E =0 f=1MHz		4.5	pF
Noise Figure	NF	V _{CE} =5V, I _C =0.2mA R _S =2kΩ, f=1KHz		6	dB
Turn On Time	T _{ON}	I _C =10mA, I _{B1} =1.0mA		150	ns
Turn Off Time	T _{OFF}	V _{BB} =3.6V, I _{B2} =1.0mA R ₁ =R ₂ =5kΩ, R _L =990Ω		800	ns

Marking

