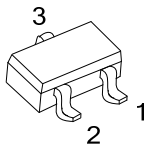
BCX70

Preliminary ***NPN EPITAXIAL SILICON TRANSISTOR***

GENERAL PURPOSE TRANSISTOR



SOT-23
(JEDEC TO-236)

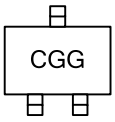
■ ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
BCX70G-AE3-R	SOT-23	E	B	C	Tape Reel

Note: Pin Assignment: E: Emitter B: Base C: Collector

BCX70G-AE3-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AE3: SOT-23 (3) G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	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 Power Dissipation	P_C	350	mW
Storage Temperature	T_{STG}	-40 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	325	°C/W

■ ELECTRICAL CHARACTERISTICS (T_A =25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	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=1.0μF, 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	100			
		V_{CE}=5V, I_C=2.0mA	380		630	
		V_{CE}=1V, I_C=50mA	100			
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, f=100MHz	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