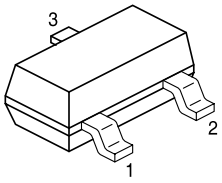
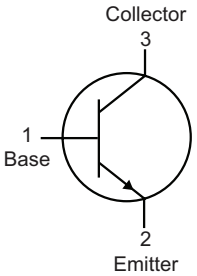
Silicon Epitaxial Planar Transistor





Features:

- High current (500mA)
- Low voltage (45V)

Applications:

- General purpose amplifiers
- Saturated switching and driver applications
- Complement: BCX17

Pin Configuration:

1. Base
2. Emitter
3. Collector

Maximum Ratings

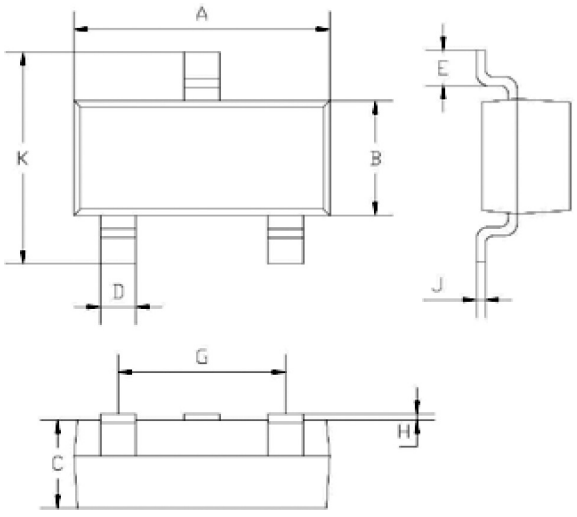
Parameter	Symbol	Value	Unit
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	45	
Emitter - Base Voltage	V_{ebo}	5	
Collector Current Continuous	I_C	500	mA
Collector Current - Peak	I_{CM}	1	A
Total Power Dissipation	P_{TOT}	250	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	T_j, T_{stg}	-65 to +150	°C

Electrical Characteristics (T_a = 25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=-100μA, I_E=0	50			V
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-10mA, I_B=0	45			
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10μA, I_C=0	5			
Collector Cut-Off Current	I_{CBO}	V_{CB}=-20V, I_E=0			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V, I_C=0			0.1	
DC Current Gain	h_{FE}	V_{CE}=1V, I_C=100mA V_{CE}=1V, I_C=300mA V_{CE}=1V, I_C=500mA	100 70 40		600	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-500mA, I_B=-50mA			0.62	V
Base Emitter Voltage	V_{BE}	I_C=-500mA, V_{CE}=-2V			1.2	
Transition Frequency	f_T	V_{CE}=5V, I_C=10mA, f=100MHz	100			MHz

Package Outline

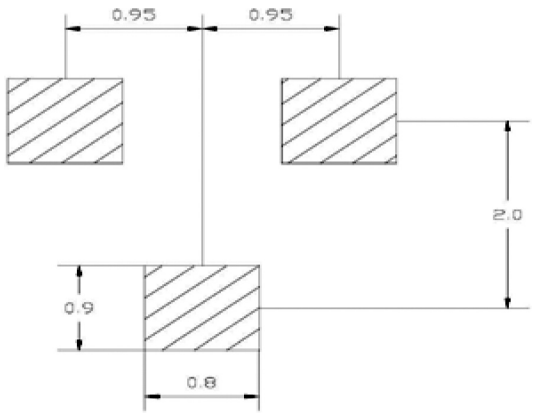
Plastic surface mounted package



Dimensions	Min.	Max.
A	2.85	2.95
B	1.25	1.35
C	1 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Part Number Table

Description	Part Number
Transistor, NPN, 0.5A, 45V, SOT23	BCX19