

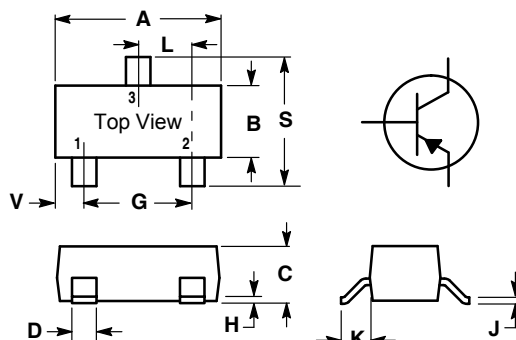
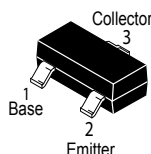
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

• Power Dissipation

$P_{CM} : 0.2 \text{ W}$ ($T_{amb} = 25^\circ\text{C}$)



SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

MAXIMUM RATINGS* ($T_A=25^\circ\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-45	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current -Continuous	-200	mA
T_J	Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

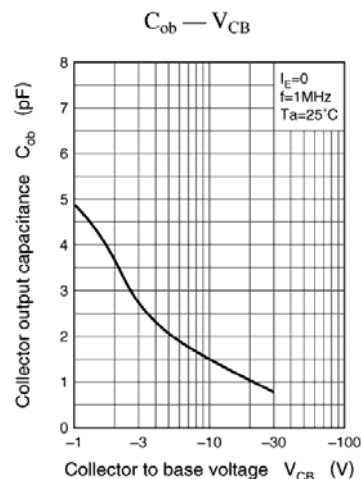
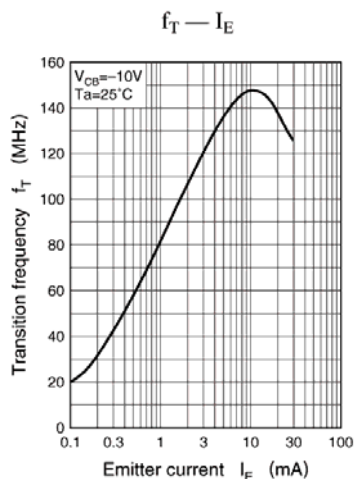
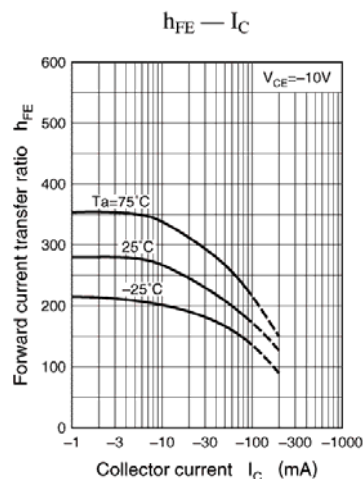
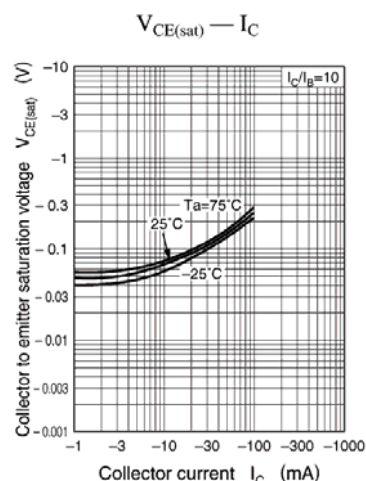
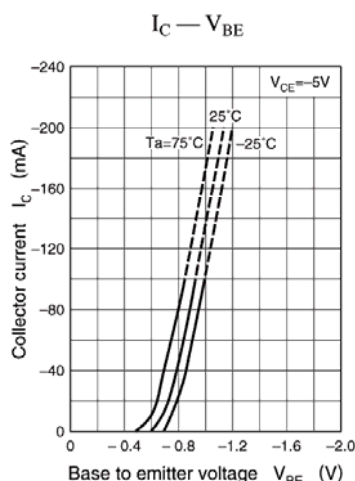
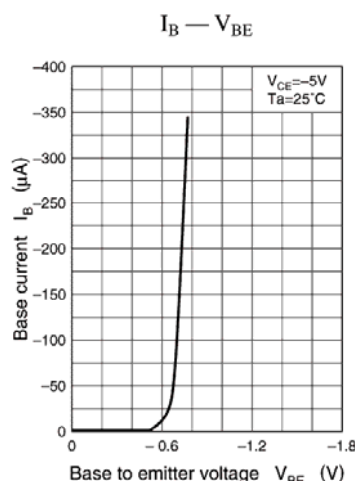
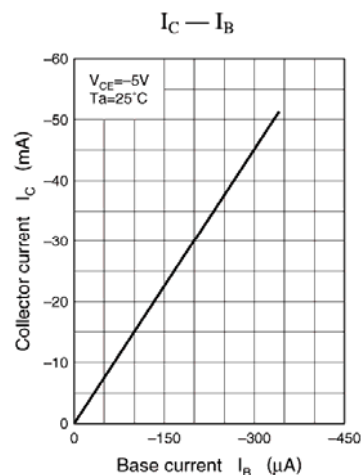
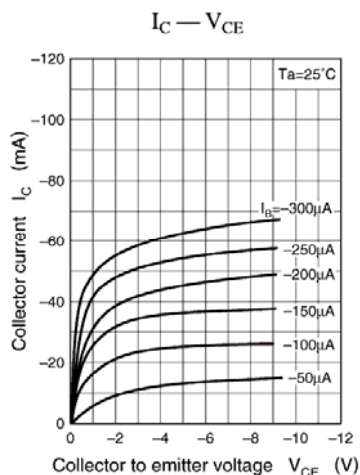
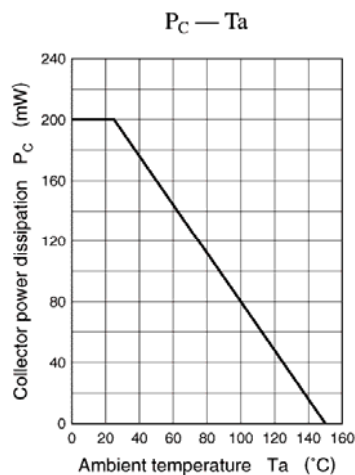
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10 \mu\text{A}, I_E=0$	-45		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-2 \text{ mA}, I_B=0$	-45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10 \mu\text{A}, I_C=0$	-7		V
Collector-base cut-off current	I_{CBO}	$V_{CB}=-20\text{V}, I_E=0$		-0.1	μA
Collector-emitter cut-off current	I_{CEO}	$V_{CE}=-10\text{V}, I_B=0$		-100	μA
DC current gain	h_{FE}	$V_{CE}=-10\text{V}, I_C=-2\text{mA}$	160	460	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$		-0.5	V
Transition frequency	f_T	$V_{CE}=-10\text{V}, I_C=-1\text{mA}, f=200\text{MHz}$	60		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		2.7	pF

CLASSIFICATION OF h_{FE}

Rank	Q	R	S
Range	160-260	210-340	290-460
Marking	BQ1	BR1	BS1

Typical Characteristics



Typical Characteristics

