

RoHS Compliant Product

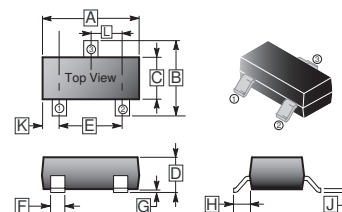
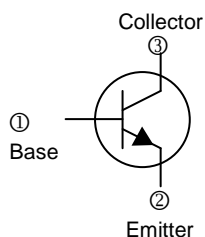
A suffix of "-C" specifies halogen & lead-free

SOT-23

## FEATURE

Power Dissipation

## MARKING: HF



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.04	G	-	0.18
B	2.10	2.80	H	0.40	0.60
C	1.20	1.60	J	0.08	0.20
D	0.89	1.40	K	0.6	REF.
E	1.78	2.04	L	0.85	1.15
F	0.30	0.50			

## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector to Base Voltage	V <sub>CB0</sub>	60	V
Collector to Emitter Voltage	V <sub>CEO</sub>	50	V
Emitter to Base Voltage	V <sub>EBO</sub>	5	V
Collector Current - Continuous	I <sub>C</sub>	150	mA
Collector Power Dissipation	P <sub>C</sub>	200	mW
Junction, Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	150, -55 ~ 150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Collector to Base Breakdown Voltage	V <sub>(BR)CB0</sub>	60	-	-	V	I <sub>C</sub> =100μA, I <sub>E</sub> = 0A
Collector to Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	50	-	-	V	I <sub>C</sub> =0.1mA, I <sub>B</sub> = 0A
Collector Cut-Off Current	I <sub>CB0</sub>	-	-	0.1	μA	V <sub>CB</sub> =60 V, I <sub>E</sub> = 0 A
Collector Cut-Off Current	I <sub>CEO</sub>	-	-	0.1	μA	V <sub>CE</sub> =50 V, I <sub>B</sub> = 0 A
Emitter Cut-Off Current	I <sub>EBO</sub>	-	-	0.1	μA	V <sub>EB</sub> =5 V, I <sub>C</sub> = 0 A
DC Current Gain	h <sub>FE</sub>	130	-	400		V <sub>CE</sub> =6V, I <sub>C</sub> =2mA
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	-	-	0.25	V	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA
Base to Emitter Saturation Voltage	V <sub>BE(sat)</sub>	-	-	1	V	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA
Transition Frequency	f <sub>T</sub>	80	-	-	MHZ	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1 mA, f = 30 MHz

## CLASSIFICATION OF h<sub>FE</sub>

Rank	L	H
Range	130-200	200-400

**CHARACTERISTIC CURVES**

