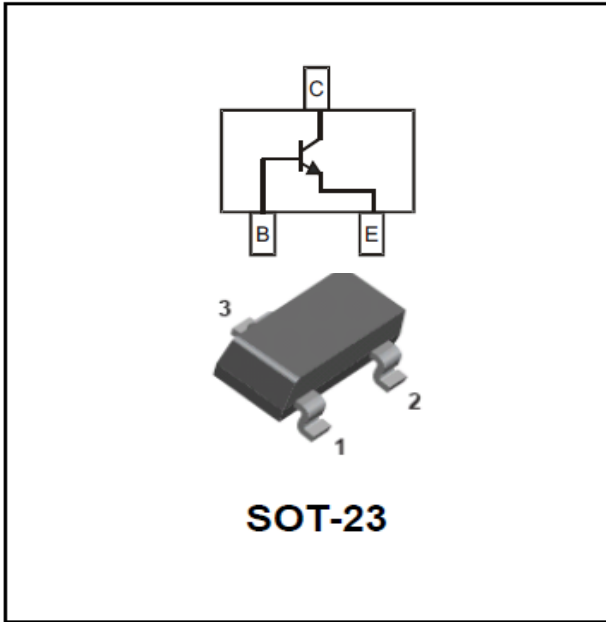


## NPN Transistor



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: J6



### ■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V		50
Collector-Emitter Voltage	VCEO	V		45
Emitter-Base Voltage	VEBO	V		5
Collector Current	IC	A		0.1
Total Device Dissipation	PC	W		0.2
Junction Temperature	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150

### ■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C=100\mu A, I_E=0$	50		
Collector-emitter breakdown voltage	$V_{(BR)CEO^*}$	V	$I_C=0.1mA, I_B=0$	45		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E=100\mu A, I_C=0$	5		
Collector cut-off current	$I_{CBO}$	$\mu A$	$V_{CB}=50V, I_E=0$			0.1
Collector cut-off current	$I_{CEO}$	$\mu A$	$V_{CE}=35V, I_B=0$			0.1
Emitter cut-off current	$I_{EBO}$	$\mu A$	$V_{EB}=3V, I_C=0$			0.1
DC current gain	$h_{FE}$	V	$V_{CE}=5V, I_C=1mA$	200		1000
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=100mA, I_B=5mA$			0.3
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=100mA, I_B=5mA$			1

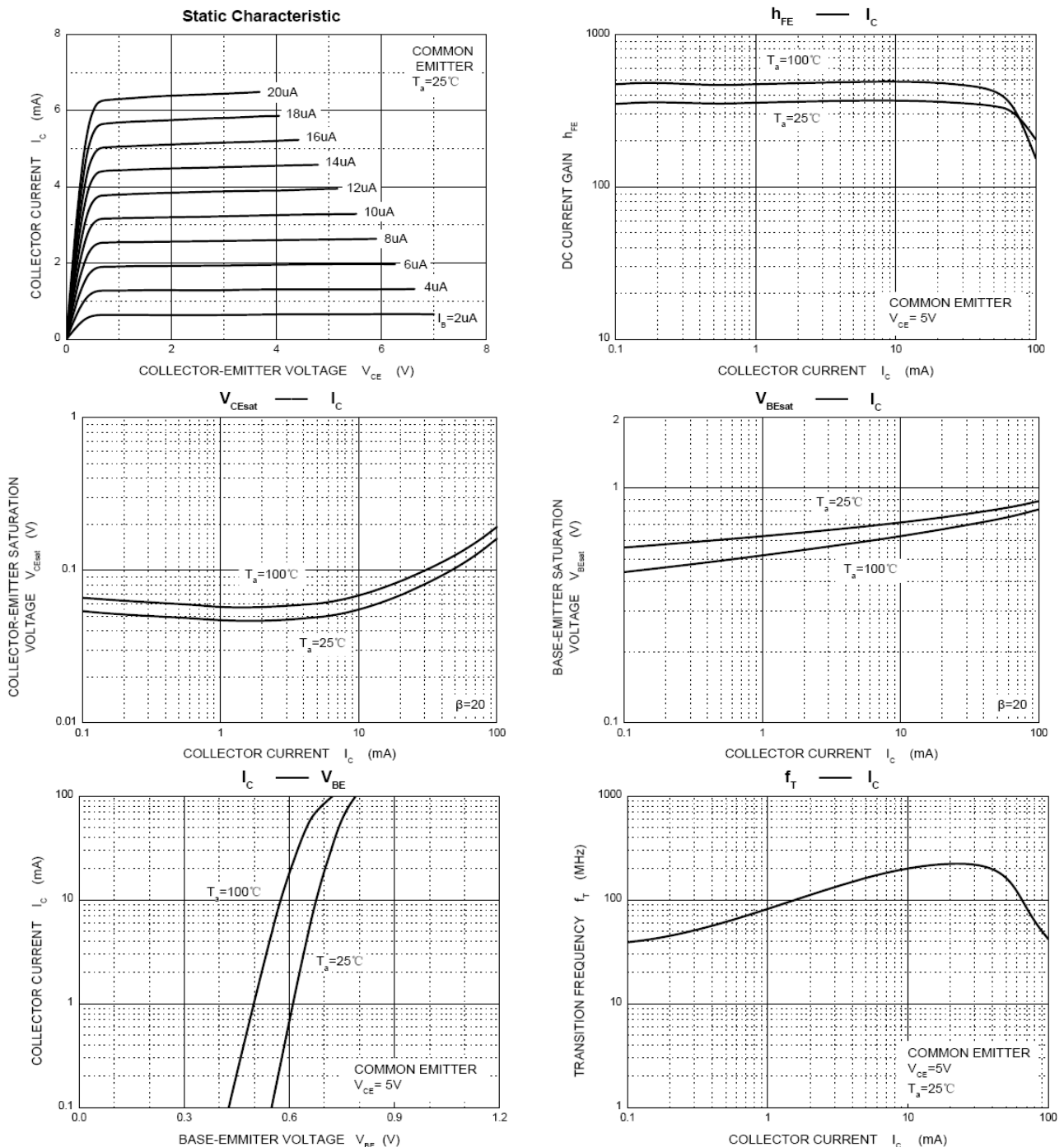
## ■ CLASSIFICATION OF HFE (1)

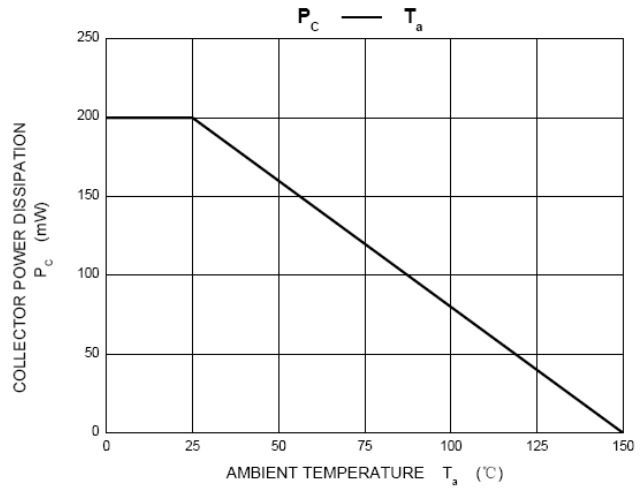
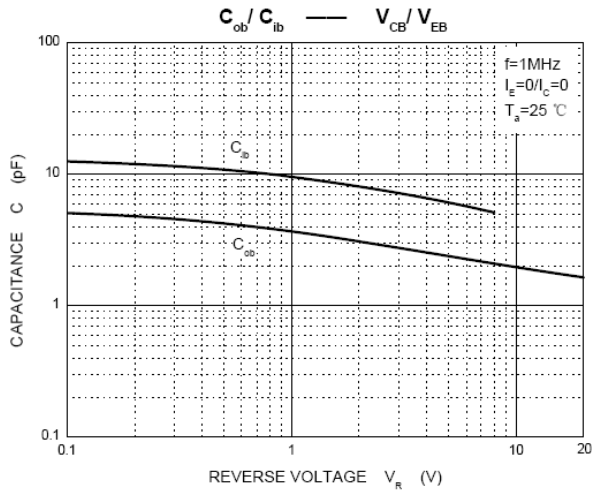
RANK	L	H
RANGE	200-450	450-1000

## ■ Ordering Information (Example)

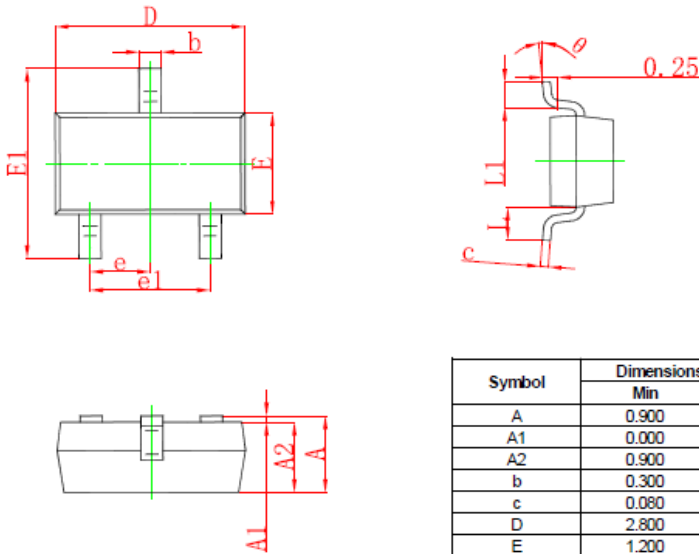
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S9014	F2	Approximate 0.008	3000	30000	120000	7" reel

## ■ Characteristics (Typical)

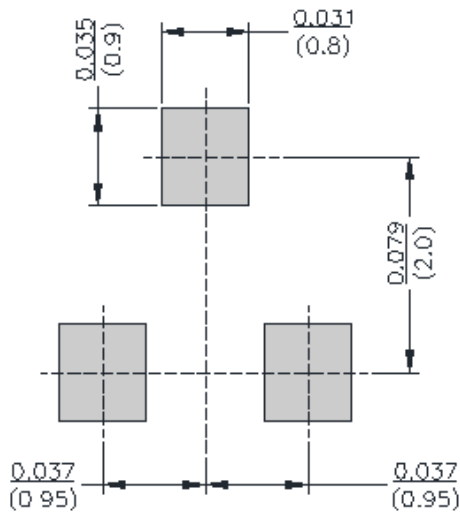




## ■ SOT-23 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
$\theta$	0 $^\circ$	8 $^\circ$	0 $^\circ$	8 $^\circ$

**■ SOT-23 Suggested Pad Layout**


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