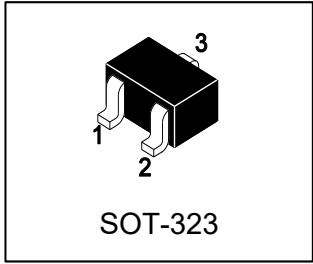


# 2SC1623SW

General Purpose Transistors NPN Silicon

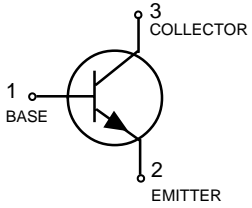


## 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.

## 2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
2SC1623SW	L7	3000/Tape&Reel



## 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	V <sub>CEO</sub>	50	V
Collector–Base Voltage	V <sub>CBO</sub>	60	V
Emitter–Base Voltage	V <sub>EB0</sub>	7	V
Collector Current — Continuous	I <sub>C</sub>	150	mA

## 4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C	PD	150 1.2	mW mW/°C
Thermal Resistance, Junction–to–Ambient(Note 1)	R <sub>θJA</sub>	833	°C/W
Junction and Storage temperature	T <sub>J</sub> , T <sub>stg</sub>	-55~+150	°C

1. FR-5 = 1.0×0.75×0.062 in.



## 5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

### OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = 1.0 mA, IB = 0)	VBR(CEO)	50	-	-	V
Collector–Base Breakdown Voltage (IC = 50 $\mu$ A, IE = 0)	VBR(CBO)	60	-	-	V
Emitter–Base Breakdown Voltage (IE = 50 $\mu$ A, IC = 0)	VBR(EBO)	7	-	-	V
Collector Cutoff Current (VCB = 60 V, IE = 0)	ICBO	-	-	100	nA
Emitter Cutoff Current (VEB = 5V, IC = 0)	IEBO	-	-	100	nA

### ON CHARACTERISTICS (Note 2.)

DC Current Gain (IC = 1.0mA, VCE = 6V)	HFE	270	-	560	
Collector–Emitter Saturation Voltage (IC = 100mA, IB = 10mA)	VCE(sat)	-	0.15	0.3	V
Base–Emitter Saturation Voltage (IC = 100mA, IB = 10mA)	VBE(sat)	-	0.86	1.0	V
Base -Emitter On Voltage (IC = 1mA, VCE = 6.0V)	VBE(on)	0.55	0.62	0.65	V

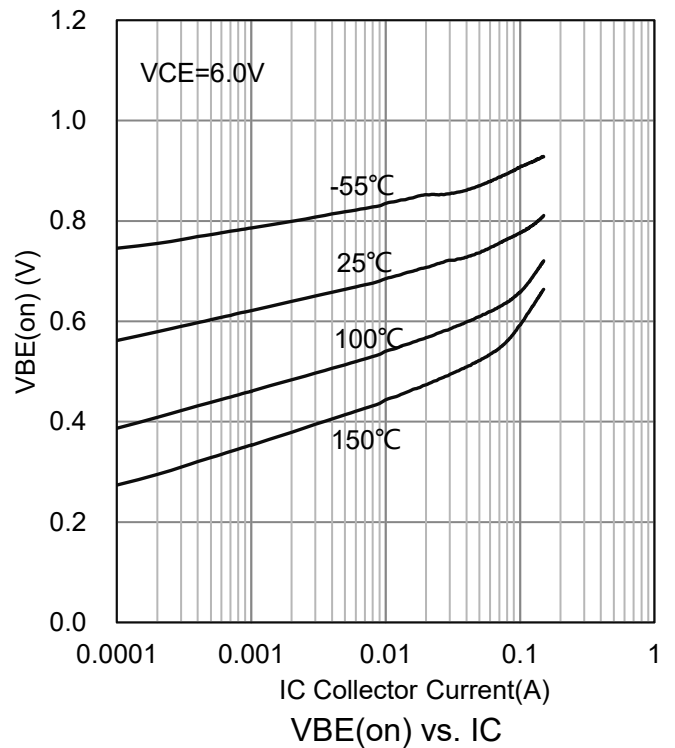
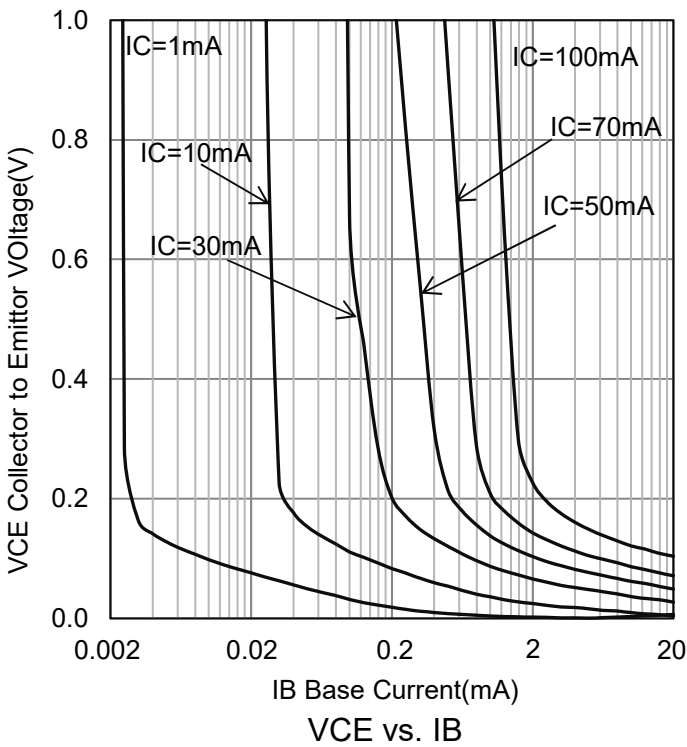
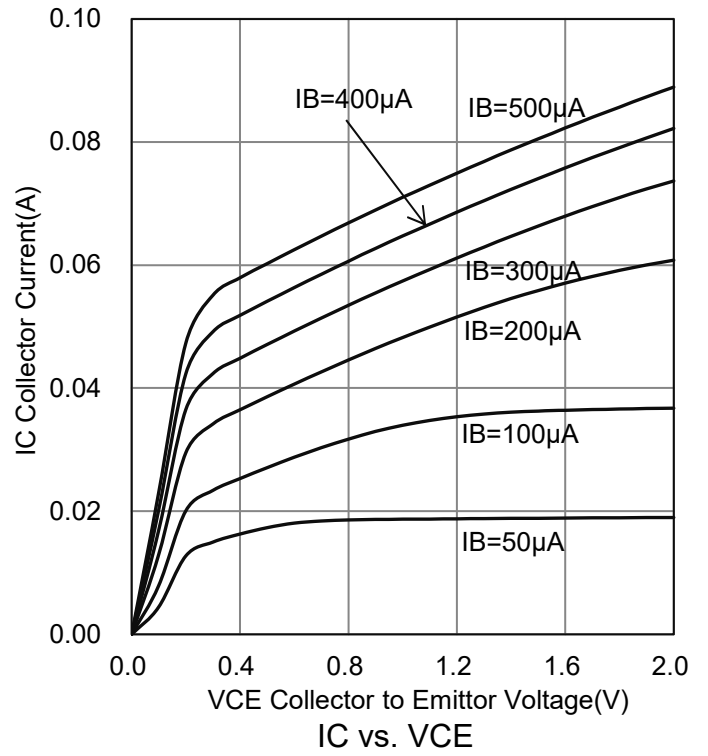
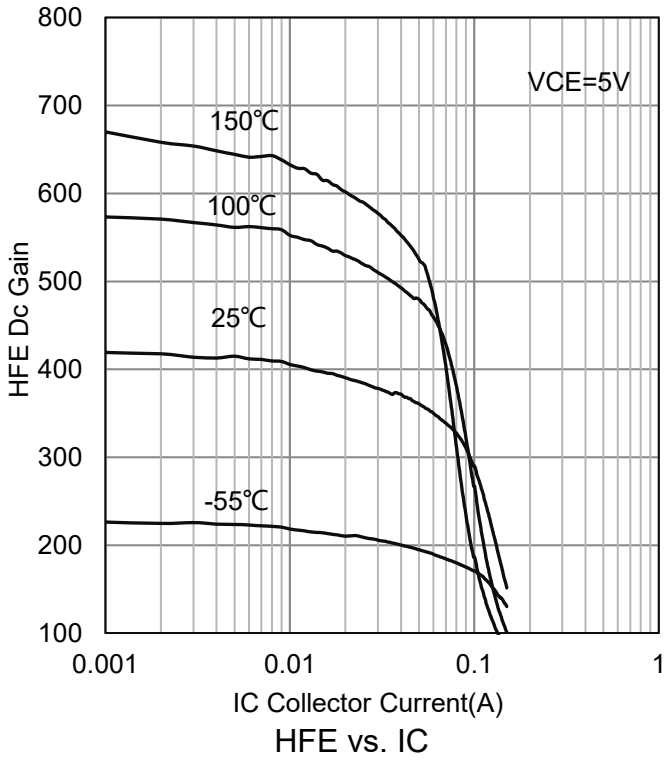
### SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product (VCE = 6.0V, IE = -10mA)	fT	-	250	-	MHz
Output Capacitance (VCE = 6V, IE = 0, f = 1.0MHz)	Cobo	-	3	-	pF

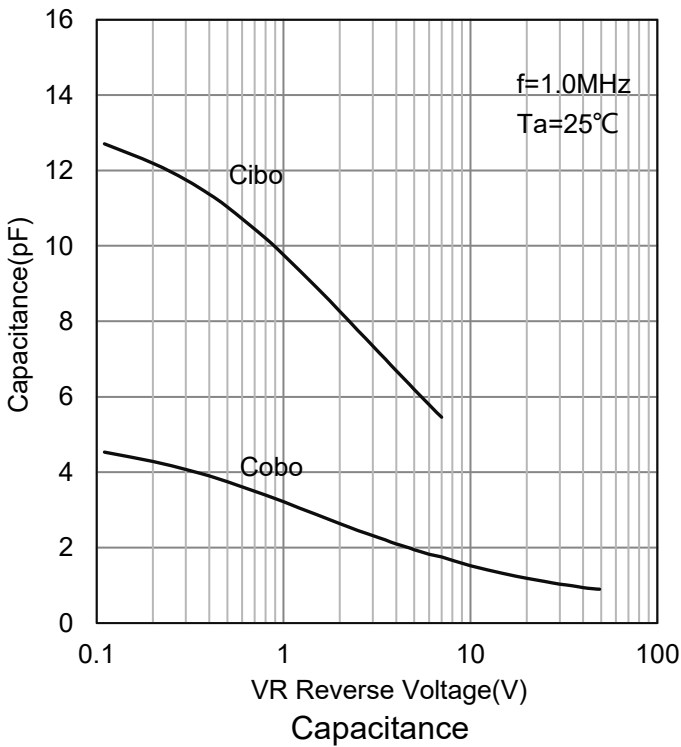
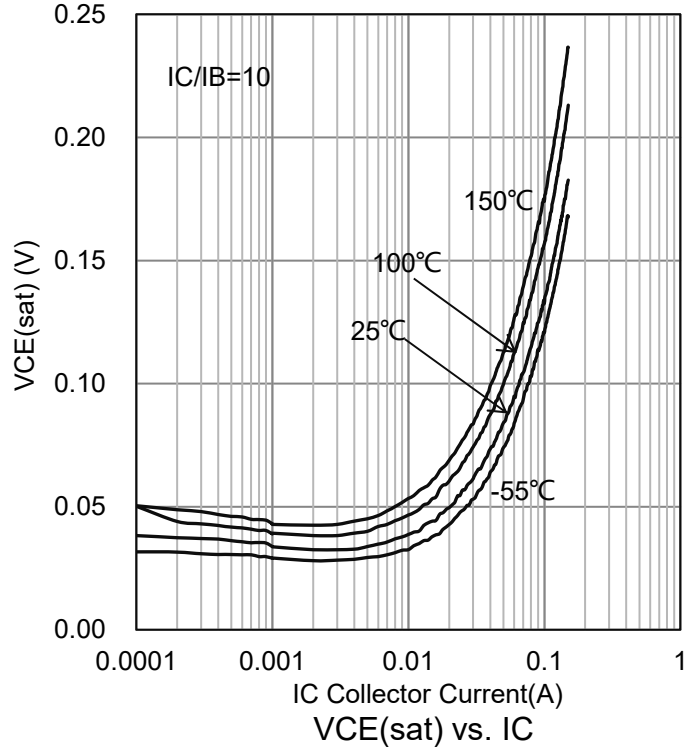
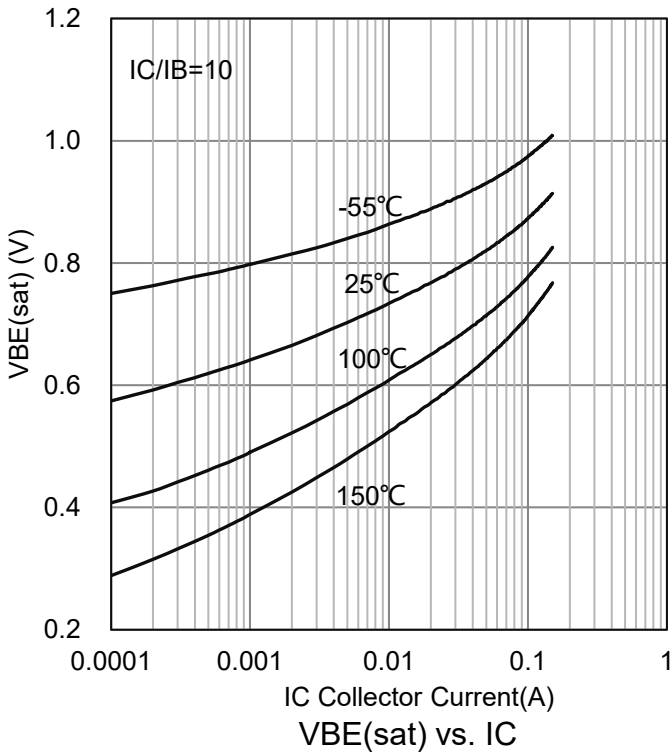
2. Pulse Test: Pulse Width  $\leq$  300  $\mu$ s, Duty Cycle  $\leq$  2.0%.



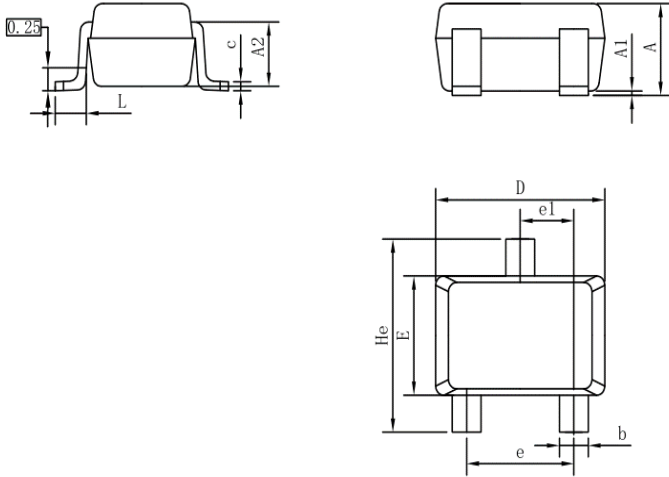
6.ELECTRICAL CHARACTERISTICS CURVES



6.ELECTRICAL CHARACTERISTICS CURVES(Con.)

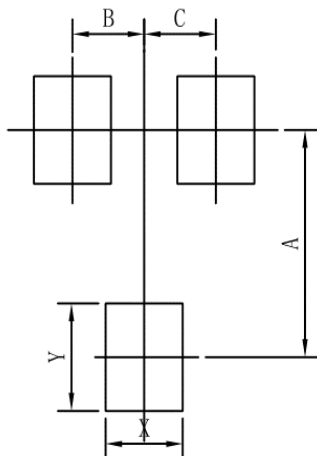


**7.OUTLINE AND DIMENSIONS**



SOT-323			
DIM	MIN	NOR	MAX
A	0.80	0.95	1.00
A1	0.00	0.05	0.10
A2	0.7 REF		
b	0.30	0.35	0.40
c	0.10	0.15	0.25
D	1.80	2.05	2.20
E	1.15	1.30	1.35
e	1.20	1.30	1.40
e1	0.65 BSC		
L	0.20	0.35	0.56
He	2.00	2.10	2.40
ALL Dimension in mm			

**8.SOLDERING FOOTPRINT**



SC70	
DIM	MIN
	1.90
B	0.65
C	0.65
X	0.70
Y	0.90

