

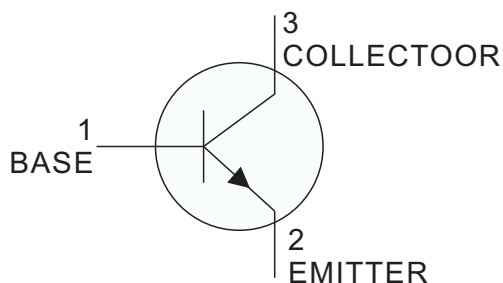
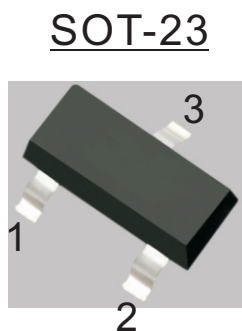


General Purpose Transistor

NPN Silicon

FEATURES

- AM/FM Amplifier, Local Oscillator of FM/VHF Tuner
- High Current Gain Bandwidth Product



DEVICE MARKING
S9018 = J8

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CEO}	15	Vdc
Collector–Base Voltage	V_{CBO}	30	Vdc
Emitter–Base Voltage	V_{EBO}	5.0	Vdc
Collector Current — Continuous	I_c	50	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1) $T_A = 25^\circ\text{C}$	P_D	200	mW
Junction and Storage Temperature	T_J, T_{stg}	- 55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)
OFF CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Collector–Emitter Breakdown Voltage(3) ($I_c = 1.0 \text{ mAdc}, I_B = 0$)	$V_{(BR)CEO}$	15	–	Vdc
Collector–Base Breakdown Voltage ($I_c = 100 \mu\text{Adc}, I_E = 0$)	$V_{(BR)CBO}$	30	–	Vdc
Emitter–Base Breakdown Voltage ($I_E = 100 \mu\text{Adc}, I_c = 0$)	$V_{(BR)EBO}$	5.0	–	Vdc
Collector cut-off current ($V_{CB} = 12 \text{ Vdc}, I_E = 0$)	I_{CBO}	–	0.05	μAdc
Collector cut-off current ($V_{CE} = 12 \text{ Vdc}, I_B = 0$)	I_{CEO}	–	0.1	μAdc
Emitter cut-off current ($V_{EB} = 3 \text{ Vdc}, I_c = 0$)	I_{EBO}	–	0.1	μAdc

1. FR–5 = $1.0 \times 0.75 \times 0.062 \text{ in.}$
2. Alumina = $0.4 \times 0.3 \times 0.024 \text{ in.}$ 99.5% alumina.
3. Pulse Test: Pulse Width $< 300 \mu\text{s}$, Duty Cycle $< 2.0\%$.



**ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) (Continued)
ON CHARACTERISTICS (3)**

Characteristic	Symbol	Min	Max	Unit
DC Current Gain	h _{FE}			—
(I _C = 1.0 mA _{DC} , V _{CE} = 5 V _{DC})		70	200	
Collector–Emitter Saturation Voltage	V _{CE(sat)}			V _{DC}
(I _C = 10 mA _{DC} , I _B = 1 mA _{DC})(3)		—	0.5	
Base–Emitter Saturation Voltage(3)	V _{BE(sat)}			V _{DC}
(I _C = 10 mA _{DC} , I _B = 1 mA _{DC})		—	1.4	

SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product (I _C = 5 mA _{DC} , V _{CE} = 5.0V _{DC} , f = 400MHz)	f _T	800(typ)	MHz
---	----------------	----------	-----

CLASSIFICATION OF h_{FE}

Rank	L	H
Range	70-100	100-200

3. Pulse Test: Pulse Width <300 μs, Duty Cycle <2.0%.



TYPICAL CHARACTERISTICS

Fig.1 Power Derating Curve

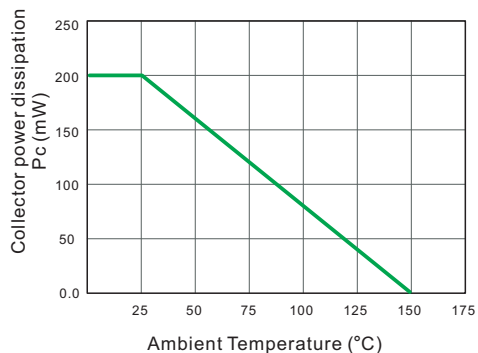


Fig.2 Static characteristics

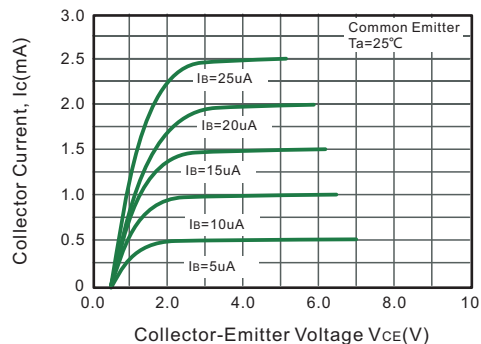


Fig.3 hFE--Ic

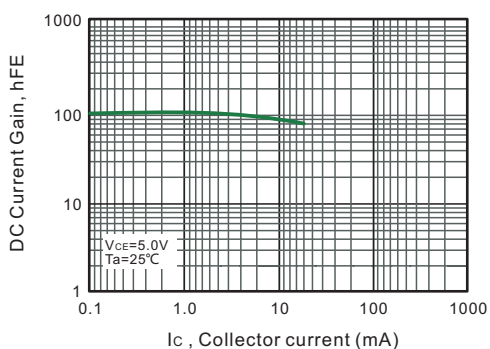


Fig.4 Ic--VBE

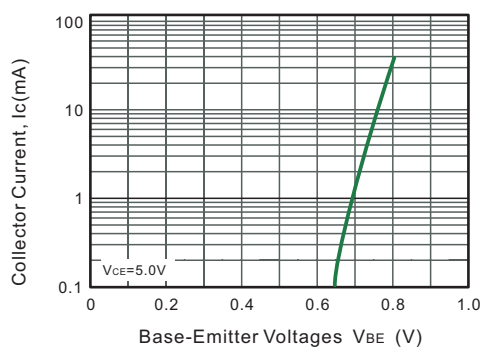


Fig.5 VBEsat--Ic

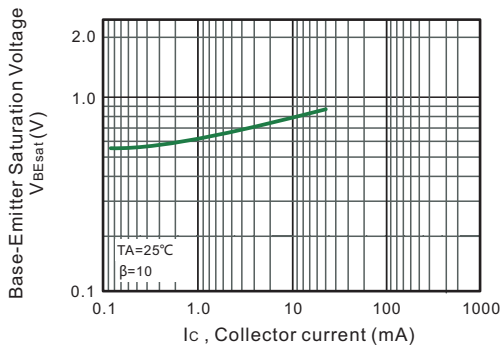


Fig.6 VCEsat--Ic

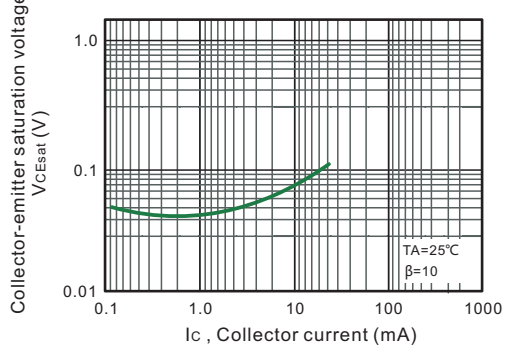


Fig.7 ft--Ic

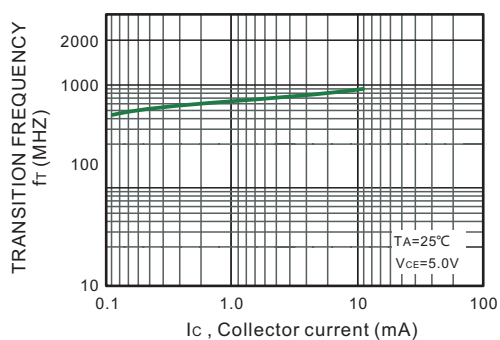
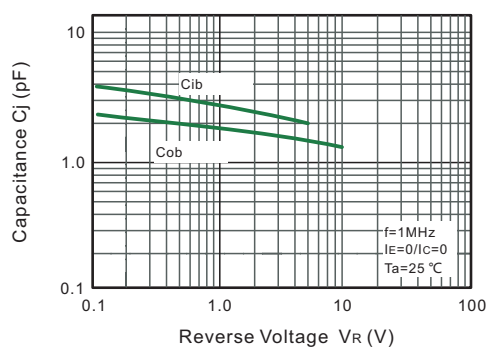
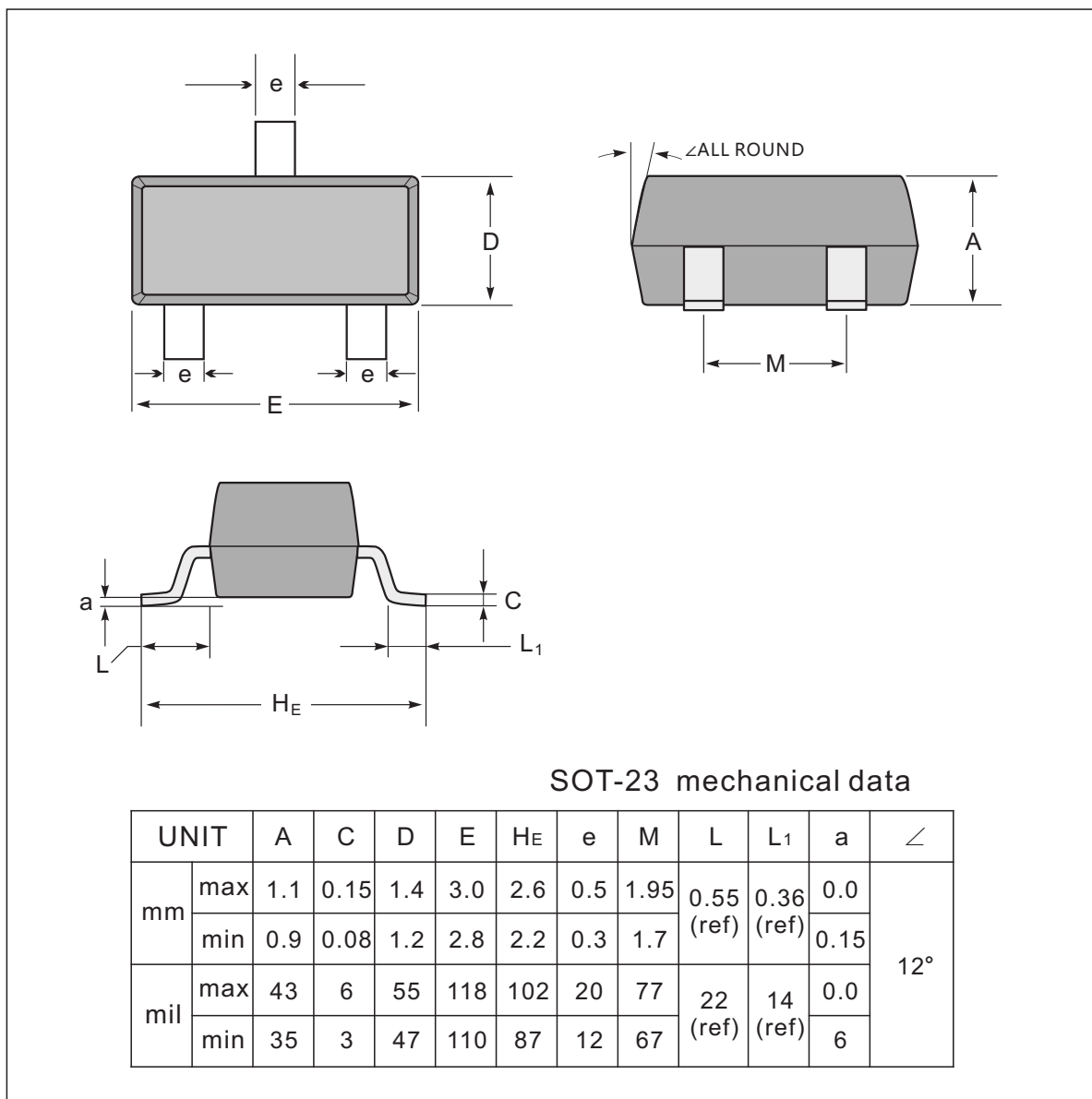


Fig.8 Cob/Cib-Vcb/VEB

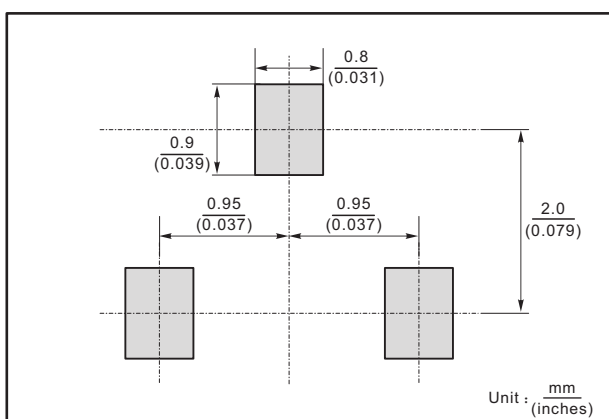




SOT-23 Package Outline Dimensions



The recommended mounting pad size



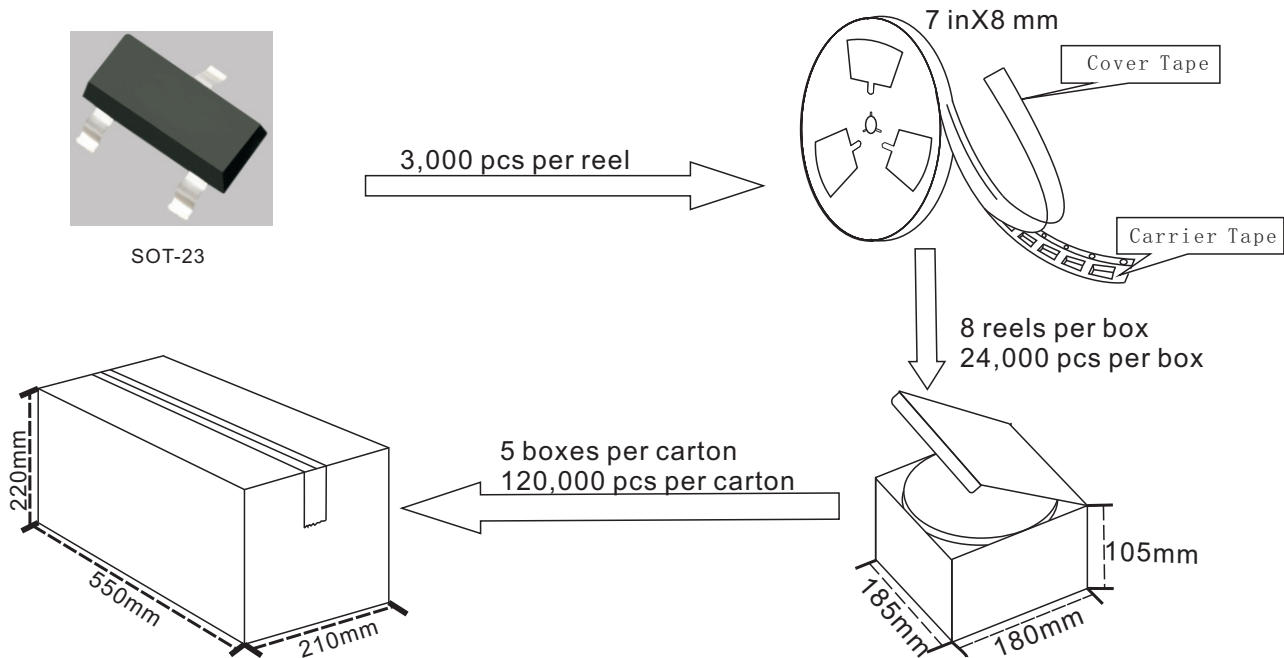
Marking

Type number	Marking code
S9018	J8

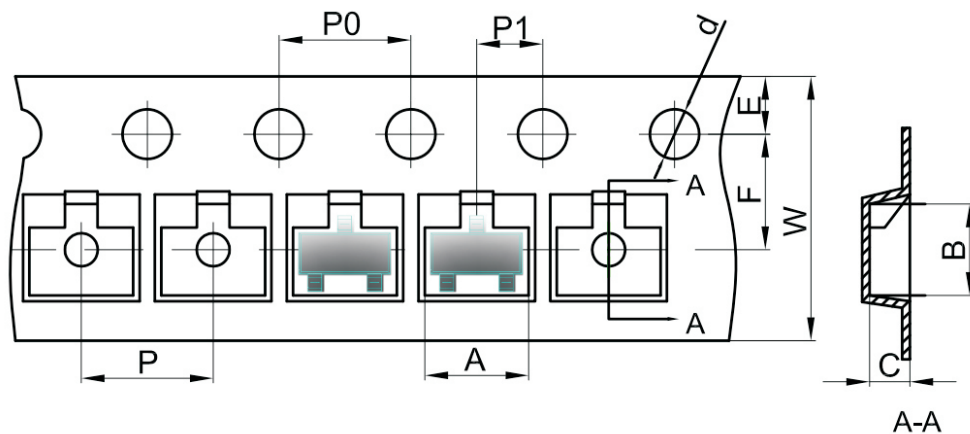


SOT-23 Packing

1. The method of packaging and dimension are shown as below figure. (Dimension in mm)



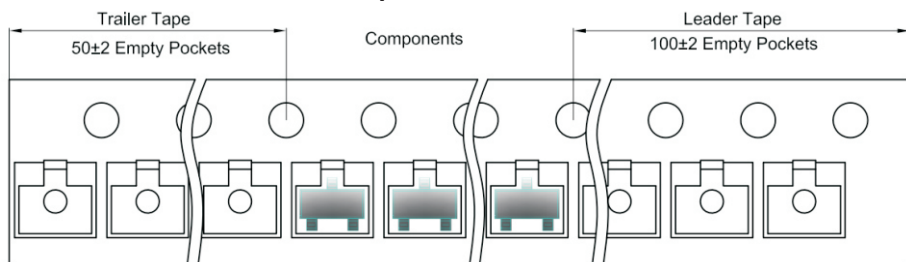
SOT-23 Embossed Carrier Tape



Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

Click to view products by [Jingdao manufacturer](#):

Other Similar products are found below :

[BC559C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [NJVMJD148T4G](#) [NTE16](#) [NTE195A](#) [IMX9T110](#) [2N4401-A](#) [2N4403](#) [2N6728](#)
[2SA1419T-TD-H](#) [2SA2126-E](#) [2SB1204S-TL-E](#) [FMC5AT148](#) [2N2369ADCSM](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC4618TLN](#) [CPH6501-](#)
[TL-E](#) [MCH4021-TL-E](#) [Jantx2N5416](#) [US6T6TR](#) [BAX18/A52R](#) [BC556/112](#) [IMZ2AT108](#) [MMST8098T146](#) [UMX21NTR](#) [MCH6102-TL-E](#)
[TTA1452B,S4X\(S](#) [2N3879](#) [NTE13](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [JANTX2N2920L](#) [JANTX2N3735](#) [JANSR2N2222AUB](#)
[CMLT3946EG TR](#) [SNSS40600CF8T1G](#) [CMLT3906EG TR](#) [GRP-DATA-JANS2N2907AUB](#) [GRP-DATA-JANS2N2222AUA](#)
[MMDT3946FL3-7](#) [2N4240](#) [JANS2N3019](#) [MSB30KH-13](#) [2N2221AUB](#)