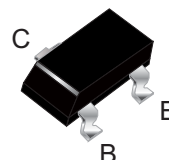


## FEATURES

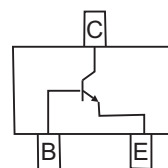
- Epoxy meets UL-94 V-0 flammability rating
- AM/FM Amplifier, Local Oscillator of FM/VHF Tuner
- Power dissipation of 200mW
- High stability and high Reliability

### SOT-23



## MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any
- Marking: J8



## MAXIMUM RATINGS( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	$V_{CE0}$	V	15
Collector-Base Voltage	$V_{CB0}$	V	30
Emitter-Base Voltage	$V_{EB0}$	V	5
Collector Current, Continuous	$I_C$	mA	50
Collector Power Dissipation	$P_D$	mW	200
Operation Junction Temperature	$T_J$	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	$T_{STG}$	$^{\circ}\text{C}$	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	625

ELECTRICAL CHARACTERISTICS( $T_A=25^{\circ}\text{C}$  Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	$I_C=1.0\text{mA}, I_B=0$	15	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=100\mu\text{A}, I_E=0$	30	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	$I_E=100\mu\text{A}, I_C=0$	5	---
Collector cut-off Current	$I_{CBO}$	nA	$V_{CB}=12\text{V}, I_E=0$	---	50
Collector cut-off Current	$I_{CEO}$	nA	$V_{CE}=12\text{V}, I_B=0$	---	100
Emitter cut-off Current	$I_{EBO}$	nA	$V_{EB}=3\text{V}, I_C=0$	---	100
DC Current Gain	$h_{FE}$		$I_C=1\text{mA}, V_{CE}=5\text{V}$	70	190
			$I_C=50\text{mA}, V_{CE}=1\text{V}$	---	---
			$I_C=100\text{mA}, V_{CE}=1\text{V}$	---	---
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=10\text{mA}, I_B=1\text{mA}$	---	0.5
			$I_C=50\text{mA}, I_B=5\text{mA}$	---	---
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=10\text{mA}, I_B=1\text{mA}$	---	1.4
			$I_C=50\text{mA}, I_B=5\text{mA}$	---	---
Output Capacitance	$C_{ob}$	pF	$V_{CB}=6\text{V}, f=1.0\text{MHz}, I_E=0$	---	---
Input Capacitance	$C_{ib}$	pF	$V_{EB}=0.5\text{V}, f=1.0\text{MHz}, I_C=0$	---	---
Current Gain-Bandwidth Product	$f_T$	MHz	$I_C=5\text{mA}, V_{CE}=5\text{V}$ $f=400\text{MHz}$	800(Typ)	
Noise Figure	NF	dB	$V_{CE}=5.0\text{V}, f=1.0\text{kHz}$ , $I_C=100\mu\text{A}, R_S=1.0\text{K}$	---	---

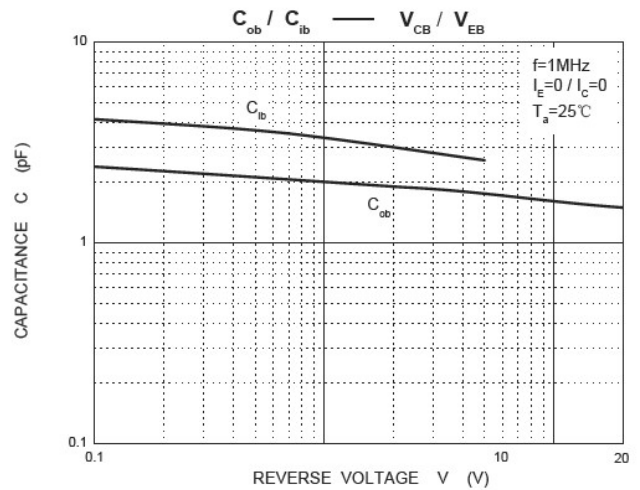
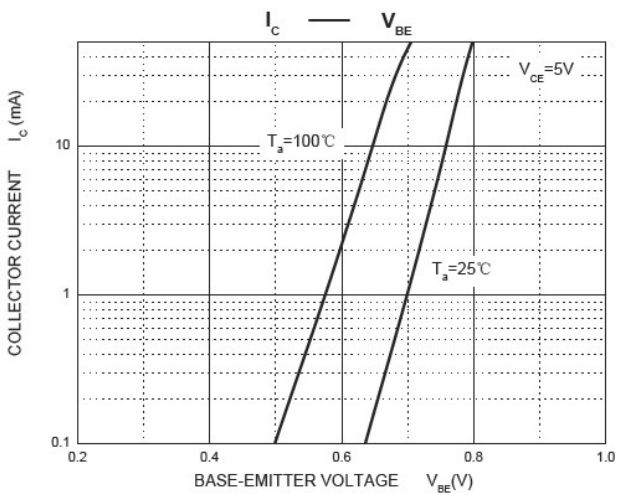
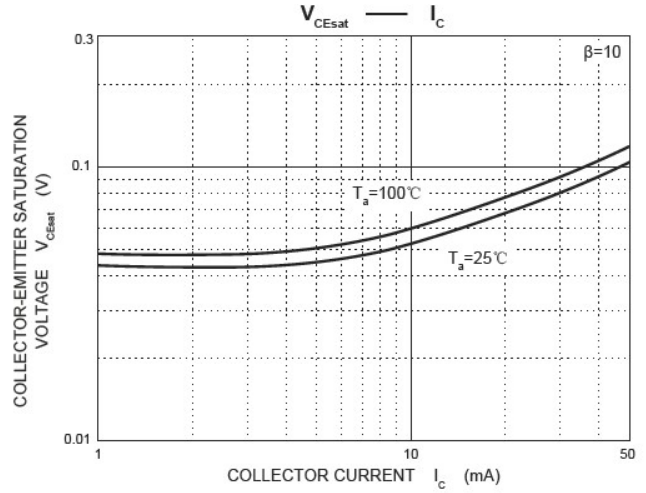
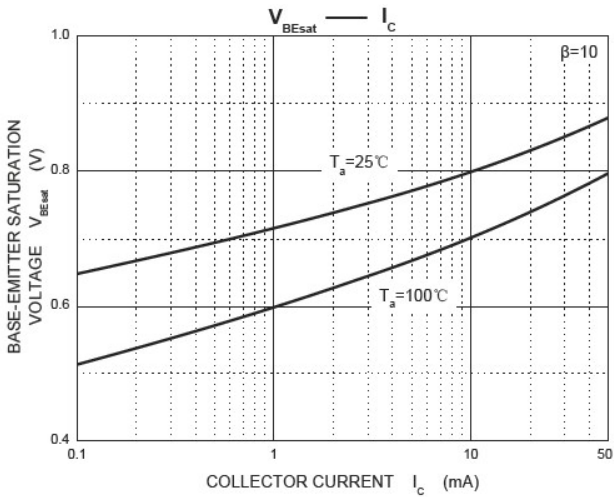
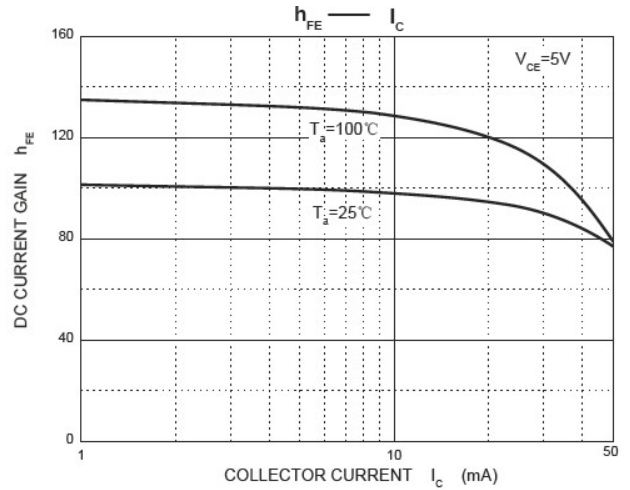
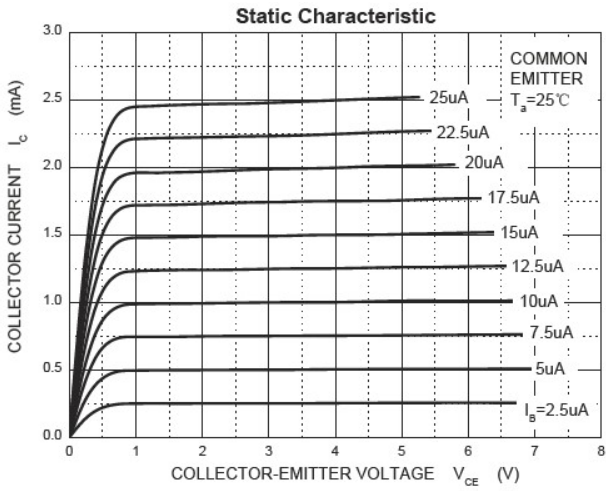
CLASSIFICATION OF  $h_{FE}$ 

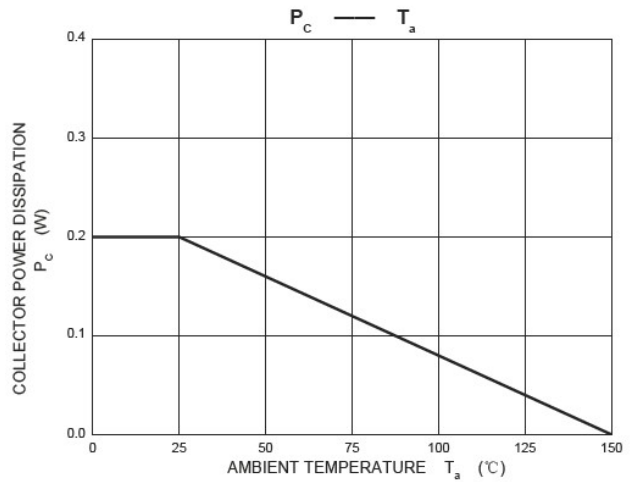
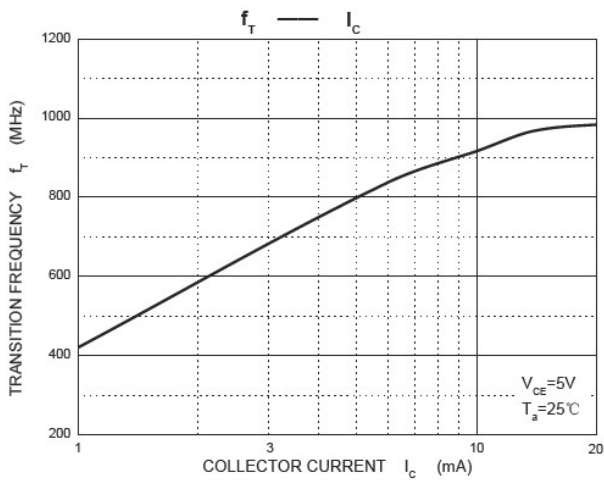
$h_{FE}$	70-190	
Rank	L	H
Range	70-105	105-190

## AVAILABLE PACK INFORMATION

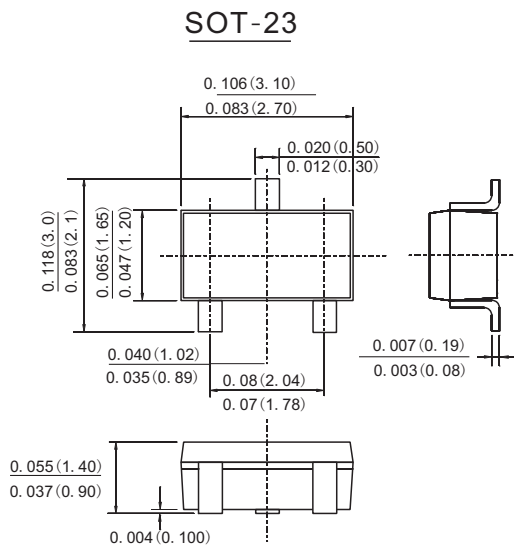
Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
S9018	T/R	$\Phi 180$	3K	30K	120K

Characteristics(Typical)



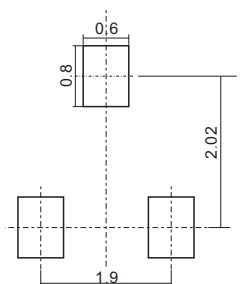


Outline Dimensions



Dimensions in inches and (millimeters)

Suggested pad layout



Dimensions in millimeters

## Friendship Reminder

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