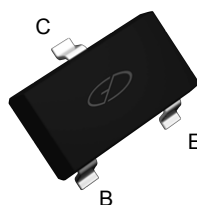
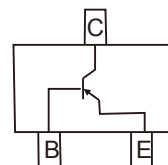


Features

- Epoxy meets UL-94V-0 flammability rating
- Power dissipation of 300mW
- High stability and high reliability



SOT-23



Schematic Diagram

Mechanical Data

- Case: SOT-23
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting position: Any

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	-25	V
Collector-Base Voltage	V _{CBO}	-40	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current, Continuous	I _C	-1500	mA
Collector Power Dissipation	P _D	300	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	417	°C/W
Operation Junction Temperature	T _J	-55 to +150	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Max	Unit
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-0.1\text{mA}$, $I_B=0$	-25	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}$, $I_E=0$	-40	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}$, $I_C=0$	-5.0	-	V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-40\text{V}$, $I_E=0$	-	-100	nA
Collector Cut-Off Current	I_{CEO}	$V_{CE}=-20\text{V}$, $I_B=0$	-	-100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5\text{V}$, $I_C=0$	-	-100	nA
Current Gain	h_{FE}	$I_C=5\text{mA}$, $V_{CE}=-1\text{V}$	-	-	-
	$h_{FE(1)}$	$I_C=-100\text{mA}$, $V_{CE}=-1\text{V}$	200	350	
	$h_{FE(2)}$	$I_C=-800\text{mA}$, $V_{CE}=-1\text{V}$	40	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}$, $I_B=1.0\text{mA}$	-	-	V
		$I_C=-800\text{mA}$, $I_B=-80\text{mA}$	-	-0.5	
Base-Emitter Saturation Voltage	V_{BE}	$I_C=-800\text{mA}$, $I_B=-80\text{mA}$	-	-1.20	V
		$V_{CE}=-1\text{V}$, $I_C=-10\text{mA}$	-	-	
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $F=1.0\text{MHz}$, $I_E=0$	-	20	pF
Input Capacitance	C_{ib}	$V_{EB}=0.5\text{V}$, $F=1.0\text{MHz}$, $I_C=0$	-	-	pF
Current Gain-Bandwidth Product	f_T	$I_C=-50\text{mA}$, $V_{CE}=-10\text{V}$, $F=30\text{MHz}$	100	-	MHz
Noise Figure	N_F	$V_{CE}=5.0\text{V}$, $F=1.0\text{kHz}$, $I_C=100\mu\text{A}$, $R_S=1.0\text{K}$	-	-	dB

Typical Characteristic Curves

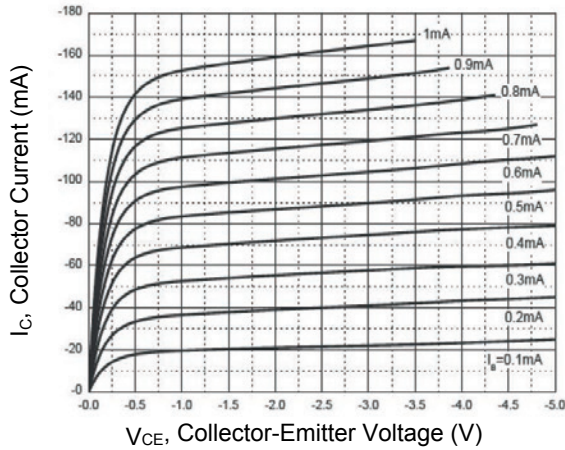


Figure 1. Static Characteristic

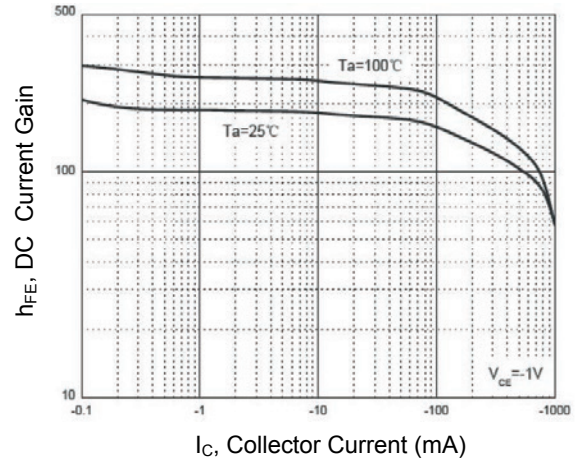


Figure 2. DC Current Gain vs. Collector Current

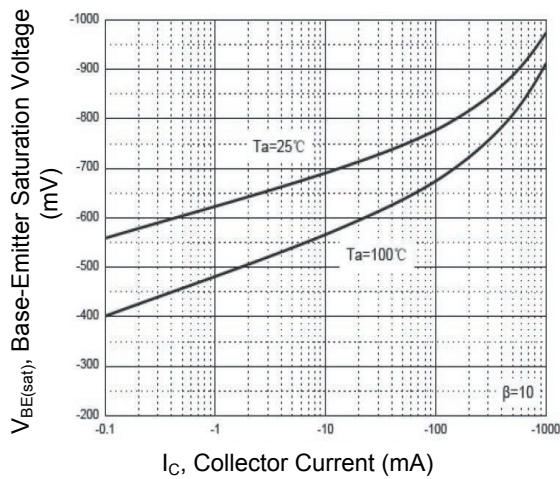


Figure 3. Base-Emitter Saturation Voltage vs. Collector Current

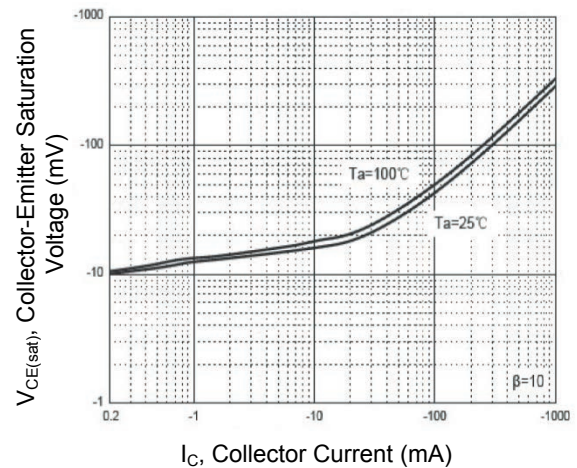


Figure 4. Collector-Emitter Saturation Voltage vs. Collector Current

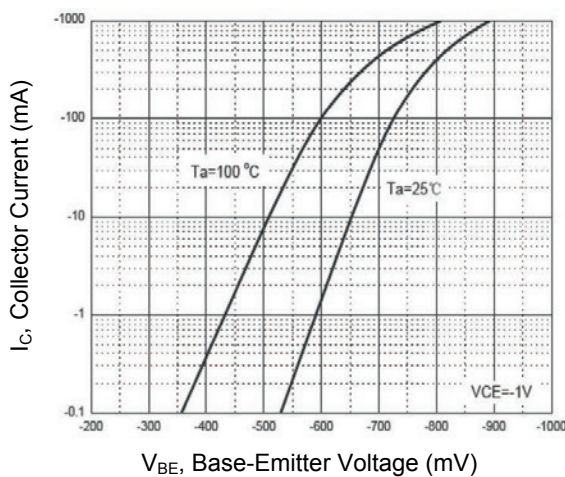


Figure 5. Collector Current vs. Base-Emitter Voltage

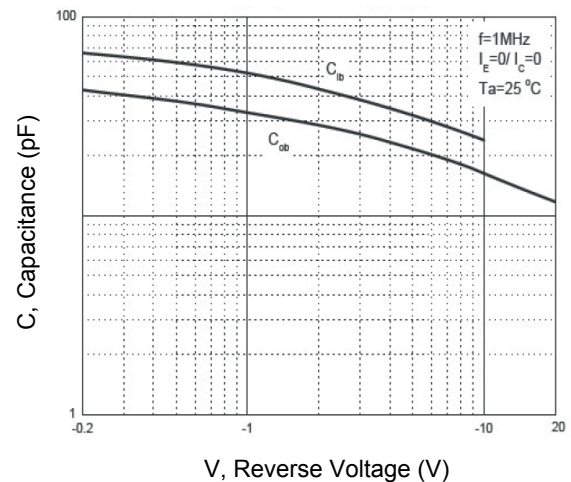


Figure 6. Capacitance Characteristics

Typical Characteristic Curves

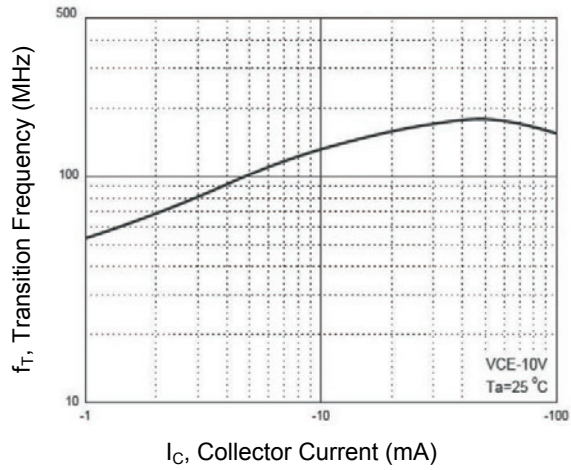


Figure 7. Transition Frequency vs. Collector Current

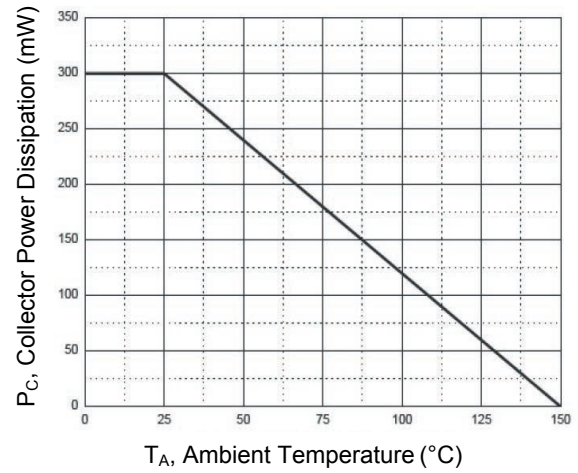
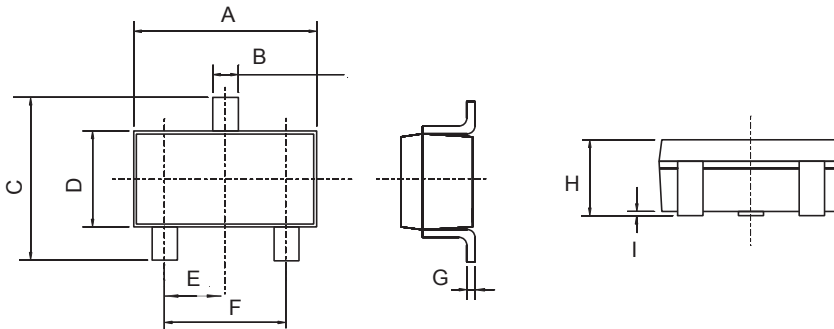


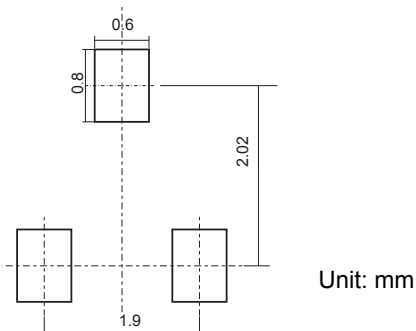
Figure 8. Power Dissipation vs. Ambient Temperature

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.70	3.10	0.106	0.122
B	0.35	0.50	0.014	0.020
C	2.20	3.00	0.087	0.118
D	1.20	1.65	0.047	0.065
E	0.89	1.02	0.035	0.040
F	1.78	2.04	0.070	0.080
G	0.08	0.19	0.003	0.007
H	0.90	1.40	0.035	0.055
I	0.10 REF		0.004 REF	

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSS8550	SOT-23	Y2	Tape & Reel	3,000pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com