

## FEATURES

- Low Noise and High Gain
- High Power Gain

Product-Rank	2SC3356
Range	125~250
Marking	R25



## MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

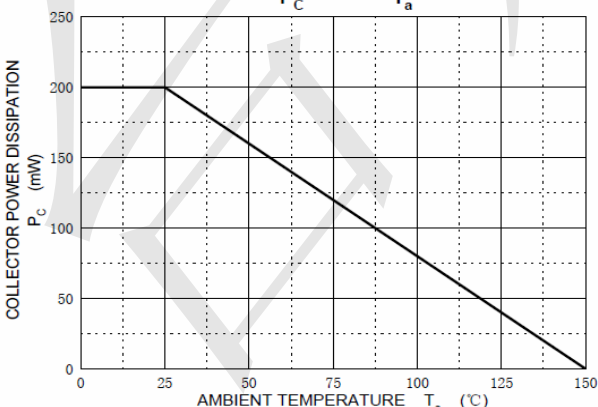
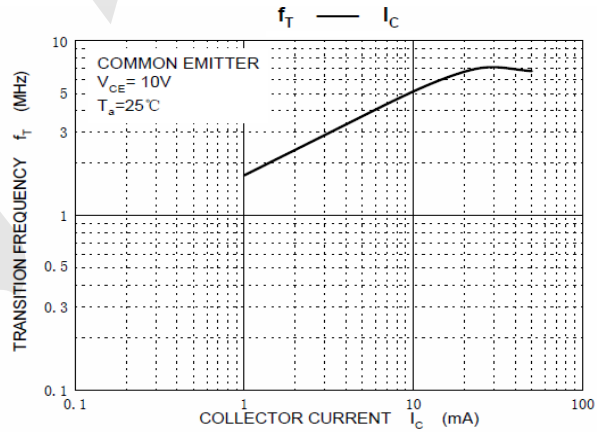
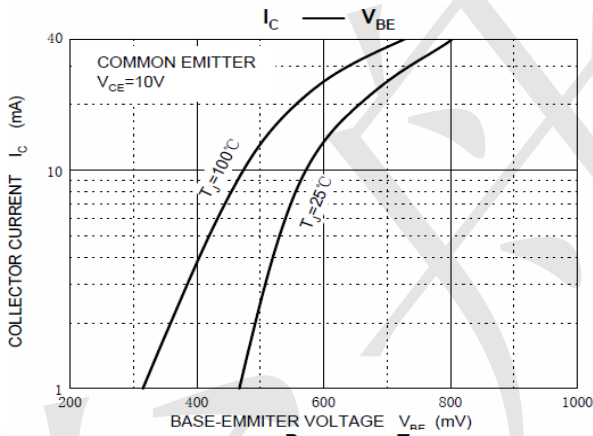
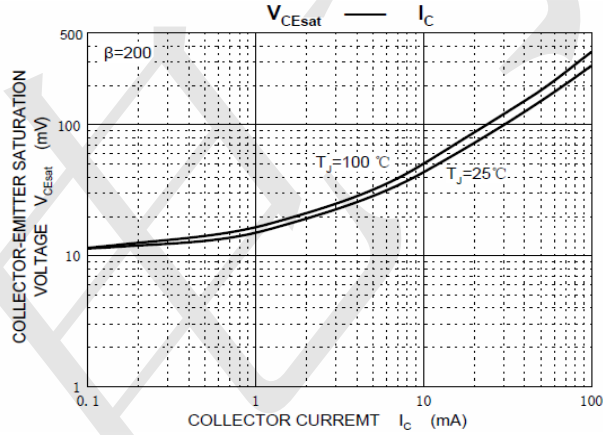
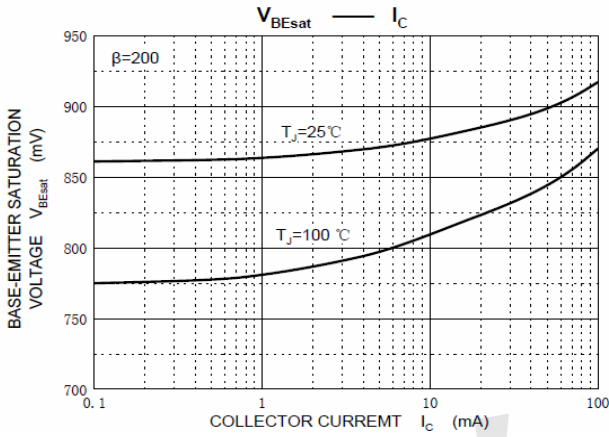
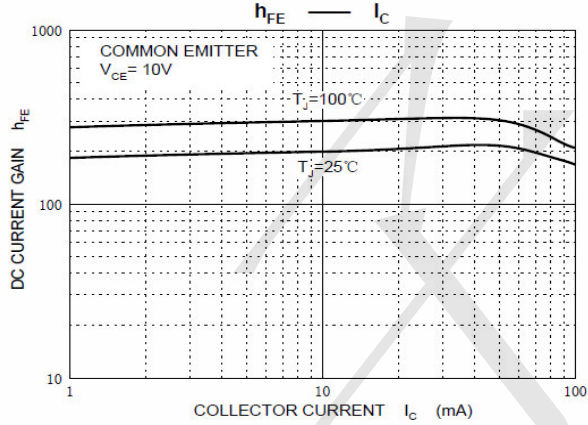
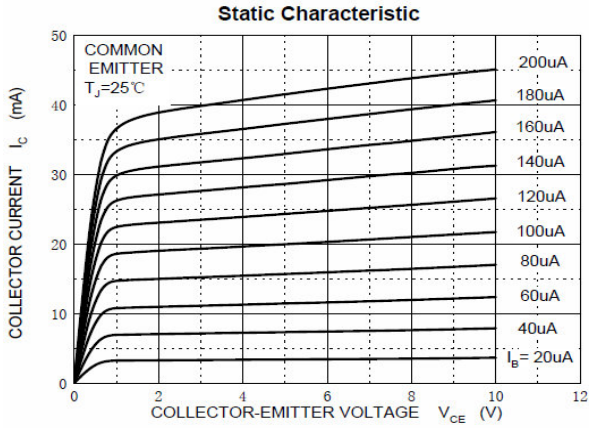
Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	$V_{CB0}$	20	V
Collector-Emitter Voltage	$V_{CEO}$	12	
Emitter-Base Voltage	$V_{EBO}$	3	
Collector Current	$I_C$	0.1	A
Collector Power Dissipation	$P_C$	0.2	W
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction & Storage Temperature	$T_J, T_{STG}$	150, -55~150	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CB0}$	20	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	12	-	-		$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	3	-	-		$I_E=100\mu\text{A}, I_C=0$
Collector Cut-off Current	$I_{CB0}$	-	-	1	$\mu\text{A}$	$V_{CB}=10\text{V}, I_E=0$
Emitter Cut-off Current	$I_{EBO}$	-	-	1		$V_{EB}=1\text{V}, I_C=0$
DC Current Gain	$h_{FE}$	50	-	250		$V_{CE}=10\text{V}, I_C=20\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.3	V	$I_C=50\text{mA}, I_B=5\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.15	V	$I_C=50\text{mA}, I_B=5\text{mA}$
Transition Frequency	$f_T$	-	7	-	GHz	$V_{CE}=10\text{V}, I_C=20\text{mA}$
Collector Output Capacitance	$C_{ob}$	-	0.8	1	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$
Noise Figure	$N_F$			2	dB	$V_{CB}=10\text{V}, I_E=7\text{mA}, f=1\text{GHz}$

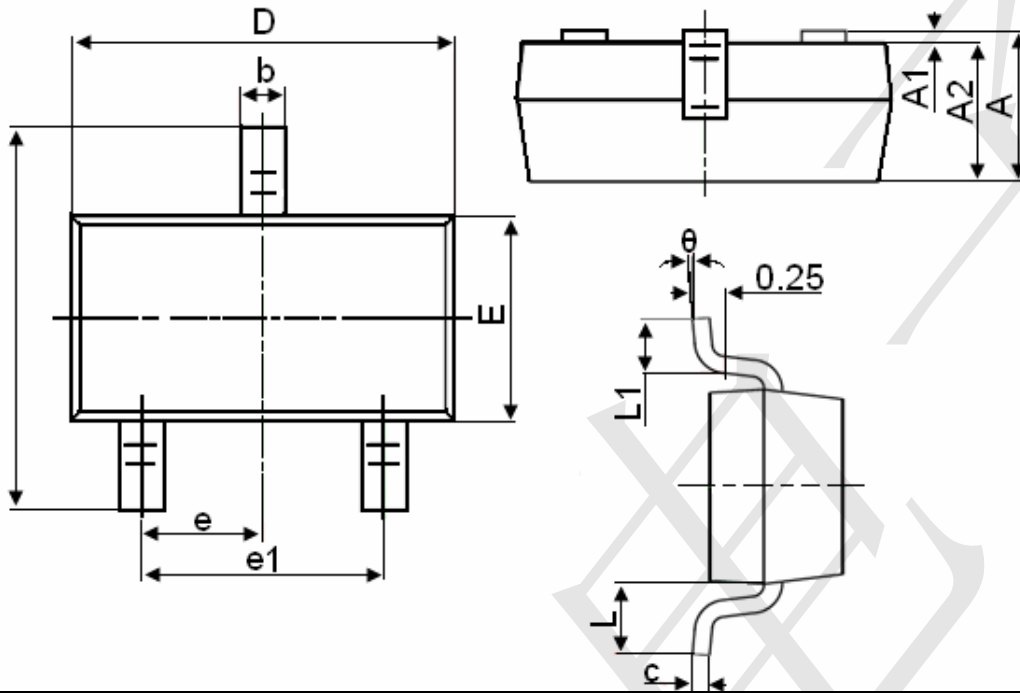


Typical Electrical and Thermal Characteristics





Package Outline Dimensions (SOT-23)



Symbol	Dimensions in Millimeters	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Notes

1. All dimensions are in millimeters.
2. Tolerance  $\pm 0.10\text{mm}$  (4 mil) unless otherwise specified
3. Package body sizes exclude mold flash and gate burrs. Mold flash at the non-lead sides should be less than 5 mils.