

RoHS Compliant Product  
A suffix of "-C" specifies halogen and lead free

## FEATURES

- Low Noise and High Gain
- High Power Gain

## CLASSIFICATION OF $h_{FE}$

Product-Rank	2SC3356-Q	2SC3356-R	2SC3356-S
Range	50~100	80~160	125~250
Marking	R23	R24	R25

## PACKAGE INFORMATION

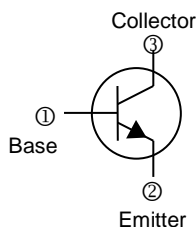
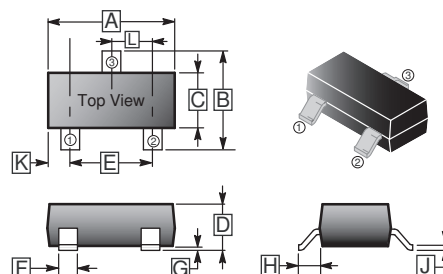
Package	MPQ	Leader Size
SOT-23	3K	7 inch

## ORDER INFORMATION

Part Number	Type
2SC3356-□	Lead (Pb)-free
2SC3356-□-C	Lead (Pb)-free and Halogen-free

\*□= $h_{FE}$  Rank

## SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.00	G	0.10	REF.
B	2.25	2.55	H	0.55	REF.
C	1.20	1.40	J	0.08	0.15
D	0.90	1.15	K	0.5	REF.
E	1.80	2.00	L	0.95	TYP.
F	0.30	0.50			

## ABSOLUTE 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	$V_{CE0}$	12	
Emitter-Base Voltage	$V_{EB0}$	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	$^\circ\text{C/W}$
Junction & Storage Temperature	$T_J, T_{STG}$	150, -55~150	$^\circ\text{C}$

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

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	$V_{(BR)CE0}$	12	-	-		$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EB0}$	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	$I_{EB0}$	-	-	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	$N_F$	-	1.65	2	dB	$V_{CB}=10\text{V}, I_E=7\text{mA}, f=1\text{GHz}$

**TYPICAL CHARACTERISTICS**

Static Characteristic

