

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

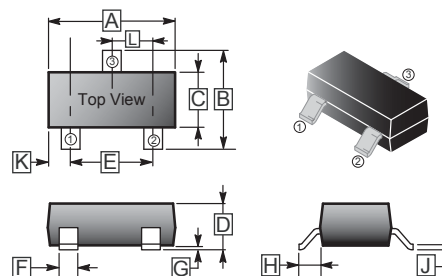
## FEATURES

- High DC Current Gain
- High Voltage
- Complementary to 2SC4177

## CLASSIFICATION OF $h_{FE}$

Product-Rank	2SA1611-M4	2SA1611-M5
Range	90~180	135~270
Marking	M4	M5
Product-Rank	2SA1611-M6	2SA1611-M7
Range	200~400	300~600
Marking	M6	M7

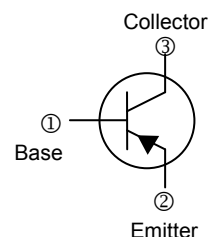
## SOT-323



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	-	-
E	1.20	1.40	L	0.650 TYP.	
F	0.20	0.40			

## PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-323	3K	7' inch



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

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CBO}$	-60	V
Collector to Emitter Voltage	$V_{CEO}$	-50	V
Emitter to Base Voltage	$V_{EBO}$	-5	V
Collector Current - Continuous	$I_C$	-100	mA
Collector Power Dissipation	$P_C$	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	833	$^\circ\text{C} / \text{W}$
Junction and 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 to Base Breakdown Voltage	$V_{(BR)CBO}$	-60	-	-	V	$I_C = -100\mu\text{A}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -100\mu\text{A}, I_C = 0$
Collector Cut-off Current	$I_{CBO}$	-	-	-100	nA	$V_{CB} = -60\text{V}, I_E = 0$
Emitter Cut-off Current	$I_{EBO}$	-	-	-100	nA	$V_{EB} = -5\text{V}, I_C = 0$
DC Current Gain	$h_{FE}$	90	-	600		$V_{CE} = -6\text{V}, I_C = -1\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.3	V	$I_C = -100\text{mA}, I_B = -10\text{mA}$
Collector to Emitter Voltage	$V_{BE}$	-0.58	-	-0.68	V	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$
Transition Frequency	$f_T$	-	180	-	MHz	$V_{CE} = -6\text{V}, I_C = -10\text{mA}$
Collector Output Capacitance	$C_{ob}$	-	4.5	-	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$

\*Pulse test : pulse width  $\leq 350\mu\text{s}$ , duty cycle  $\leq 2.0\%$ .