

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

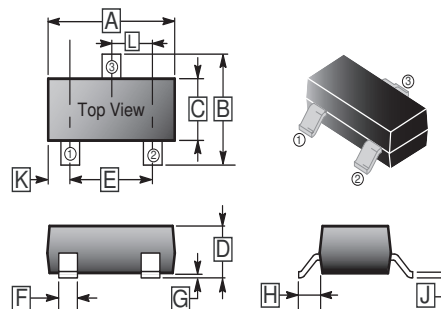
FEATURE

- High forward current transfer ratio h_{FE}
- Low collector to emitter saturation voltage $V_{CE(sat)}$

CLASSIFICATION OF h_{FE}

Product-Rank	2SD601A-Q	2SD601A-R	2SD601A-S
Range	160~260	210~340	290~460
Marking Code	ZQ	ZR	ZS

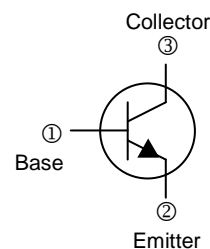
SOT-23



PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-23	3K	7' inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.78	2.04	L	0.89	1.02
F	0.30	0.50			



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

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}	7	V
Collector Current - Continuous	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
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 to Base Breakdown Voltage	$V_{(BR)CBO}$	60	-	-	V	$I_C=10\mu\text{A}, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	50	-	-	V	$I_C=2\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	7	-	-	V	$I_E=10\mu\text{A}, I_C=0$
Collector Cut-Off Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=20\text{V}, I_E=0$
Emitter Cut-Off Current	I_{EBO}	-	-	100	μA	$V_{EB}=10\text{V}, I_C=0$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.3	V	$I_C=100\text{mA}, I_B=10\text{mA}$
DC Current Gain	$h_{FE(1)}$	160	-	460		$V_{CE}=10\text{V}, I_C=2\text{mA}$
	$h_{FE(2)}$	90	-	-		$V_{CE}=2\text{V}, I_C=100\text{mA}$
Transition Frequency	f_T	-	150	-	MHz	$V_{CE}=10\text{V}, I_C=2\text{mA}, f=200\text{MHz}$
Collector Output Capacitance	C_{ob}	-	3.5	-	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$