Elektronische Bauelemente

S9013W

0.5A , 40V

NPN Plastic Encapsulated Transistor

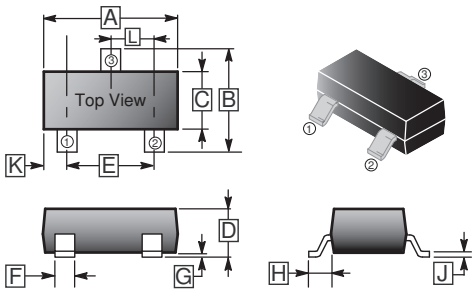
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

- High Collector Current
- Excellent HFE Linearity

SOT-323

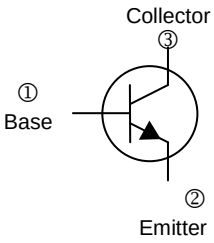


CLASSIFICATION OF h_{FE}

Product-Rank	S9013W-L	S9013W-H	S9013W-J
Range	120~200	200~350	300~400
Marking Code	J3		

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-323	3K	7 inch



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			

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	500	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	625	℃ / W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	℃

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	40	-	-	V	I_C=100μA, I_E=0
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	25	-	-	V	I_C=1mA, I_B=0
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	I_E=100μA, I_C=0
Collector Cut-Off Current	I_{CBO}	-	-	0.1	μA	V_{CB}=40V, I_E=0
Collector Cut-Off Current	I_{CEO}			0.1	μA	V_{CE}=20V, I_B=0
Emitter Cut-Off Current	I_{EBO}	-	-	0.1	μA	V_{EB}=5V, I_C=0
DC Current Gain	h_{FE}	120	-	400		V_{CE}=1V, I_C=50mA
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.6	V	I_C=500mA, I_B=50mA
Base to Emitter Saturation Voltage	$V_{BE(sat)}$			1.2	V	I_C=500mA, I_B=50mA
Base to Emitter Voltage	V_{BE}	-	-	0.7	V	I_C=10mA, V_{CE}=1V
Transition Frequency	f_T	150	-	-	MHz	V_{CE}=6V, I_C=20mA, f=30MHz
Collector output capacitance	C_{ob}	-	-	8	pF	V_{CB}=6V, I_E=0, f=1MHz