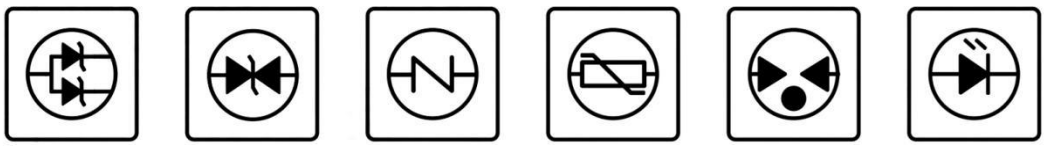
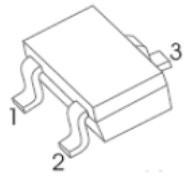
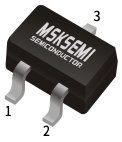
MSKSEMI
SEMICONDUCTOR



Product data sheet



1. BASE
2. EMITTER
3. COLLECTOR



SOT-323

S9014W

TRANSISTOR (NPN)

FEATURES

- Complementary to S9015W
- Small Surface Mount Package

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	100	mA
P_C	Collector Power Dissipation	200	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55～+150	℃

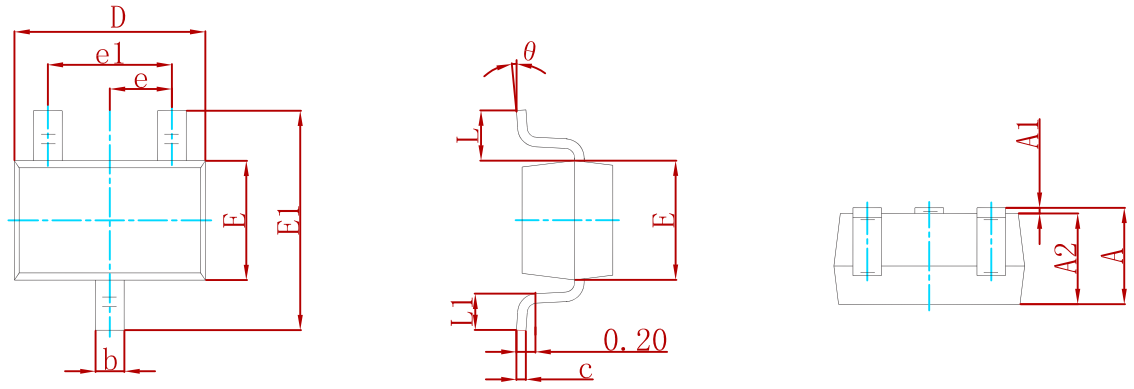
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=100μA, I_B=0	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=50V, I_E=0			100	nA
Collector cut-off current	I_{CEO}	V_{CE}=35V, I_B=0			1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			100	nA
DC current gain	h_{FE}	V_{CE}=5V, I_C=1mA	200		1000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=5mA			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=100mA, I_B=5mA			1	V
Base-emitter voltage	V_{BE}	V_{CE}=5V, I_C=2mA	0.58		0.7	V
Transition frequency	f_T	V_{CE}=5V,I_C=10mA , f=30MHz	150			MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz			3.5	pF

CLASSIFICATION OF h_{FE}

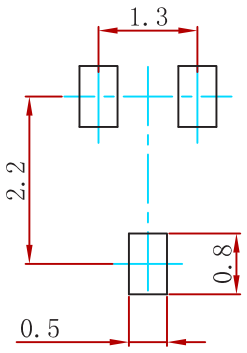
RANK	L	H
RANGE	200－450	450－1000
MARKING	J6	

PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
S9014W	SOT-323	3000

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