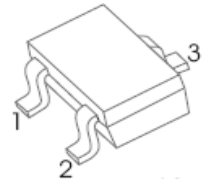


**TRANSISTOR (NPN)****FEATURES**

- Complementary to S9015W
- Small Surface Mount Package

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ 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	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	$-55 \sim +150$	$^{\circ}\text{C}$

SOT - 323

1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

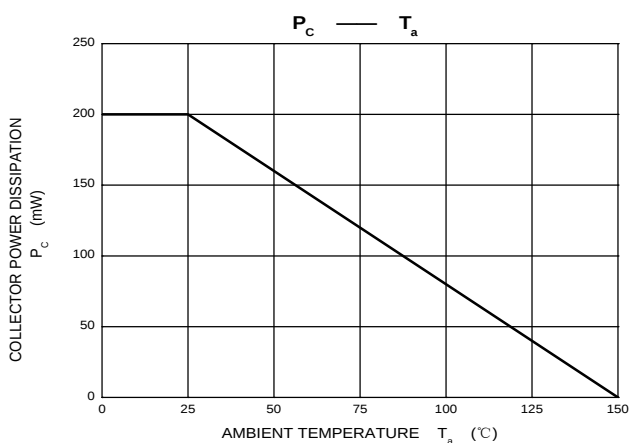
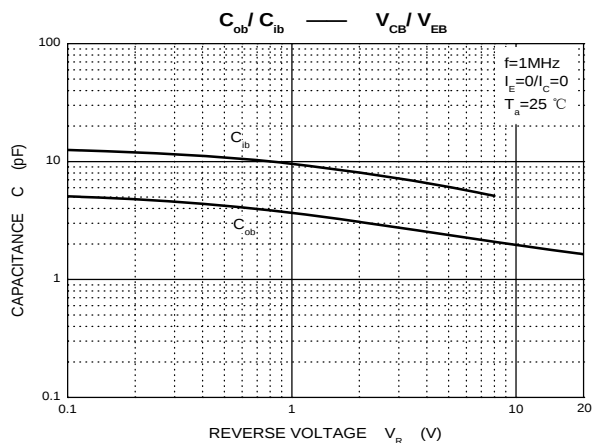
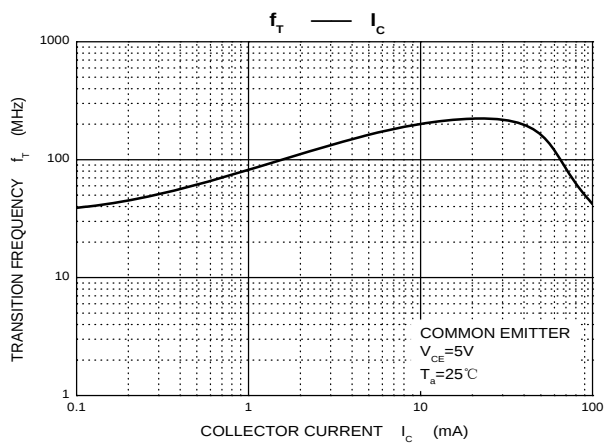
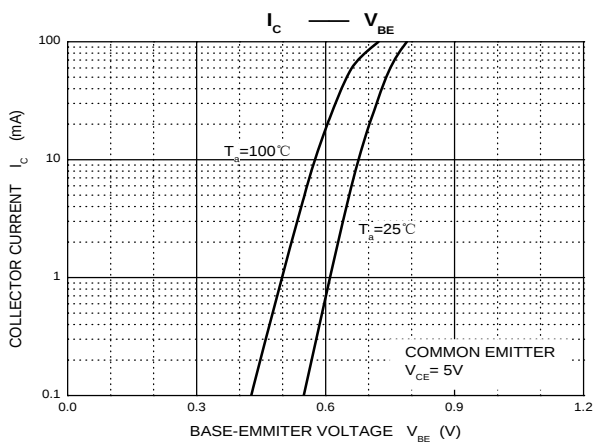
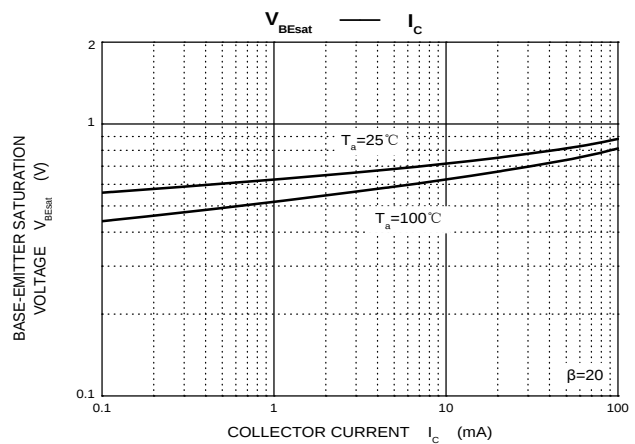
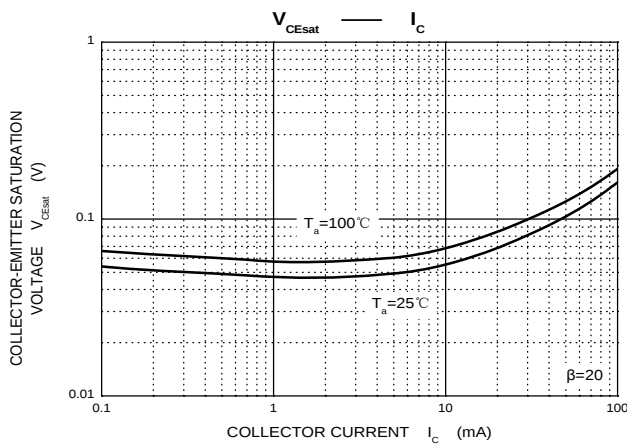
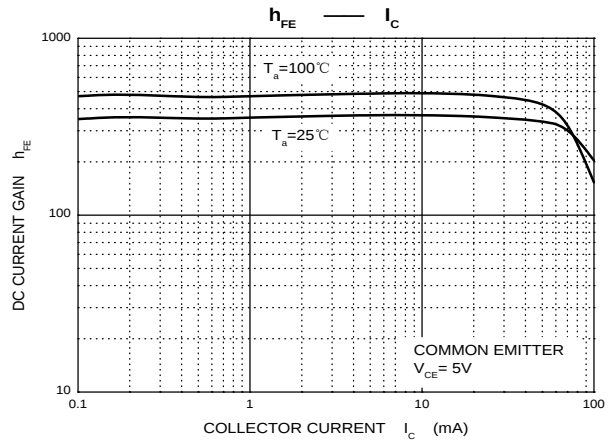
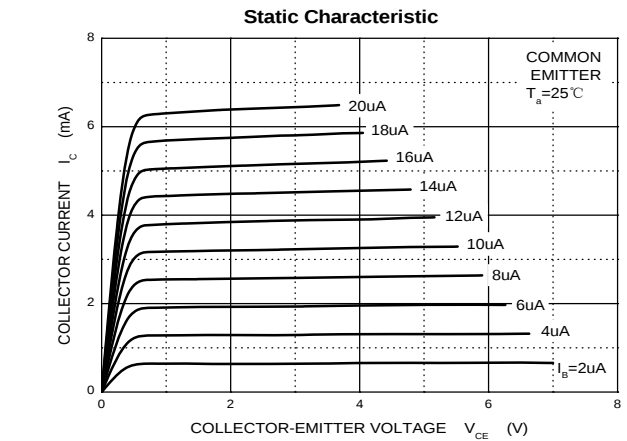
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=100\mu\text{A}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector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

CLASSIFICATION OF h_{FE}

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

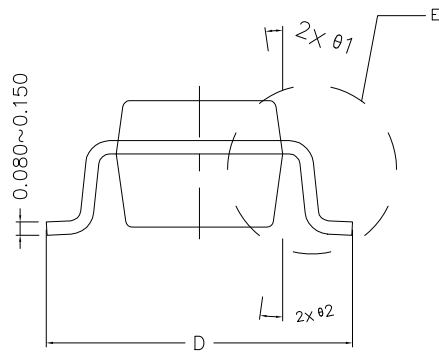


Typical Characteristics

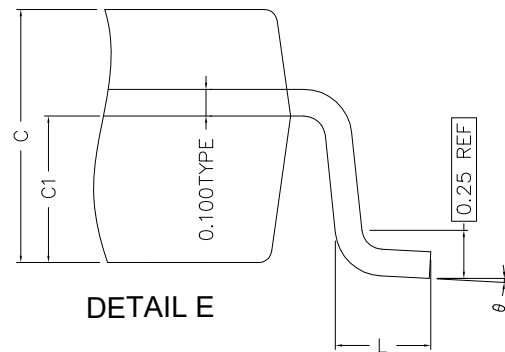




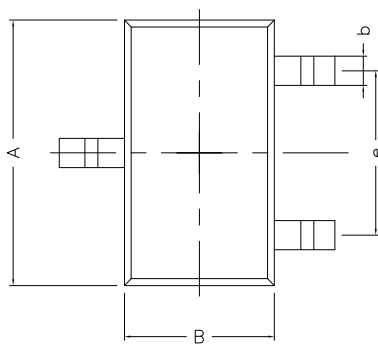
SOT-323 Package Outline Dimensions



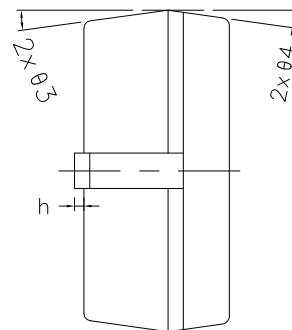
SIDE VIEW



DETAIL E



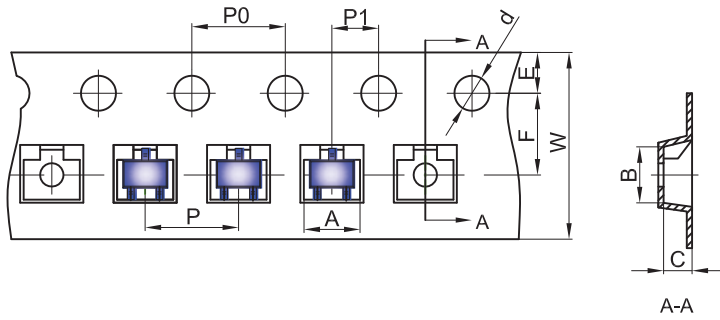
TOP VIEW



SIDE VIEW

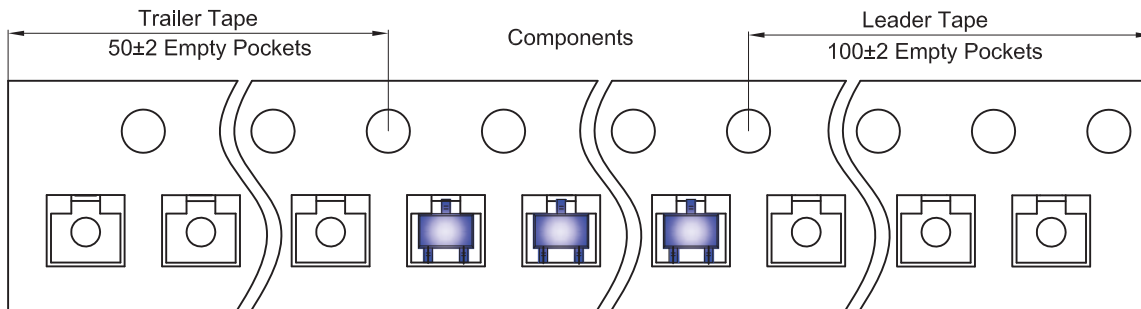
COMMON DIMENSIONS (UNITS OF MEASURE IS mm)			
	MIN	NORMAL	MAX
A	2.000	2.100	2.200
B	1.150	1.250	1.350
C	0.900	0.950	1.000
C1	0.500	0.550	0.600
D	2.100	2.300	2.500
L	0.220	0.360	0.500
b	0.200	0.250	0.400
h	0.020	0.050	0.100
e	1.300TYPE		
θ ₁	8° TYPE		
θ ₂	8° TYPE		
θ ₃	8° TYPE		
θ ₄	8° TYPE		
θ	0~8° TYPE		

SOT-323 Embossed Carrier Tape

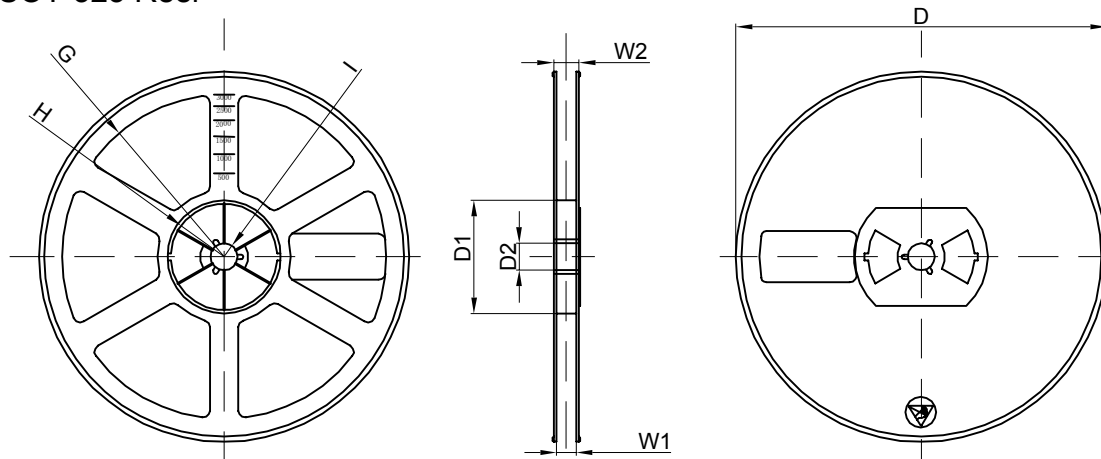


Dimensions are in millimeter											
Pkg type	A	B	C	d	E	F	P0	P	P1	W	
SOT-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00	

SOT-323 Tape Leader and Trailer



SOT-323 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	192x182x182	180,000 pcs	400x385x205	