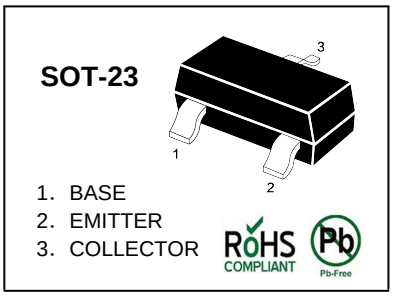
Lastinght

2SA1020

PNP SILICON TRANSISTOR

SILICON PNP EPITAXIAL TRANSISTOR



■ DESCRIPTION

The **2SA1020** is designed for power amplifier and power switching applications.

■ FEATURES

*Low collector saturation voltage:
$V_{CE(SAT)}$=-0.5$V_{(MAX)}$ (I_C=-1A)
*High speed switching time: t_{STG}=1.0μs(TYP)
*Complement to 2SC2655

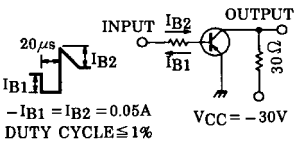
MARKING : 1020

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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	-50	V
Collector-Emitter Voltage		V_{CEO}	-50	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current		Ic	-2	A
Collector Power Dissipation	SOT-23	P_C	300	mW
	SOT-89		500	mW
	TO-92		900	mW
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

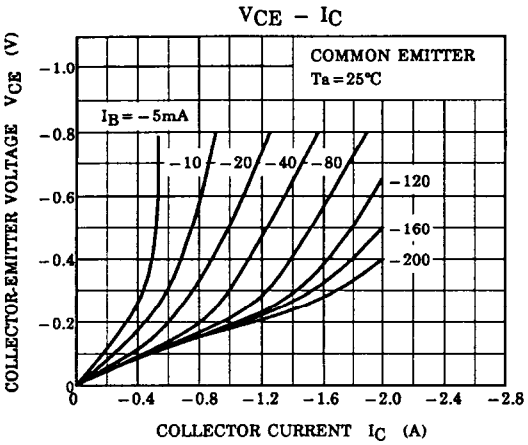
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

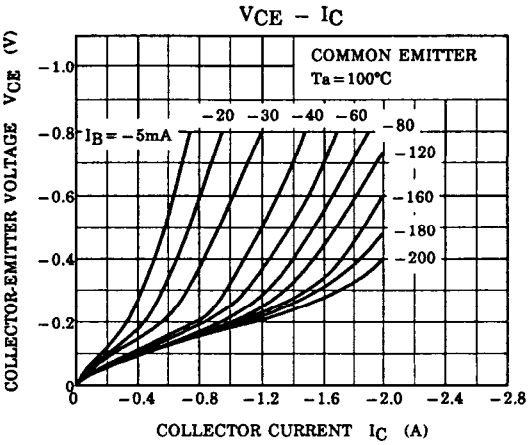
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Emitter Breakdown Voltage		BV_{CEO}	I_C=-10mA, I_B=0	-50			V
Collector Cut-off Current		I_{CBO}	V_{CB}=-50V, I_E=0			-1.0	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0			-1.0	μA
DC Current Gain		h_{FE1}	V_{CE}=-2V, I_C=-0.5A	70		240	
		h_{FE2}	V_{CE}=-2V, I_C=-1.5A	40			
Collector to Emitter Saturation Voltage		$V_{CE(SAT)}$	I_C=-1A, I_B=-0.05A			-0.5	V
Base to Emitter Saturation Voltage		$V_{BE(SAT)}$	I_C=-1A, I_B=-0.05A			-1.2	V
Transition Frequency		f_T	V_{CE}=-2V, I_c=-0.5A		100		MHz
Collector Output Capacitance		C_{OB}	V_{CB}=-10V, I_E=0, f=1MHz		40		pF
Switching Time	Turn-on Time	t_{ON}			0.1		μs
	Storage Time	t_{STG}			1.0		μs
	Fall Time	t_F			0.1		μs

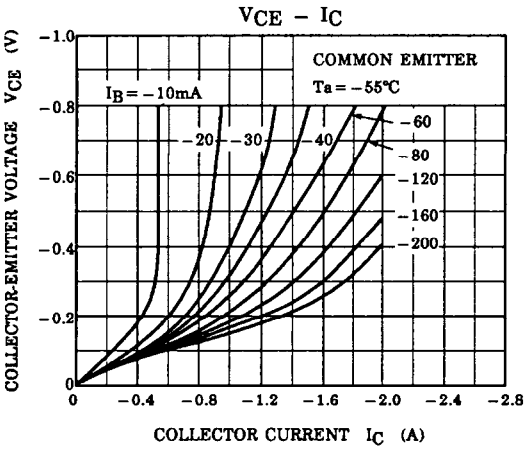
■ CLASSIFICATION OF h_{FE1}

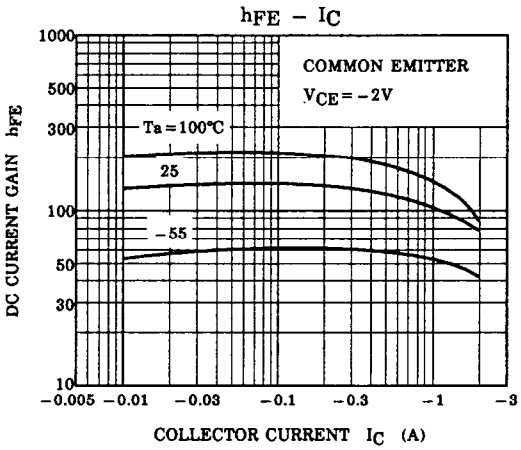
RANK	O	Y
RANGE	70 - 140	120 - 240

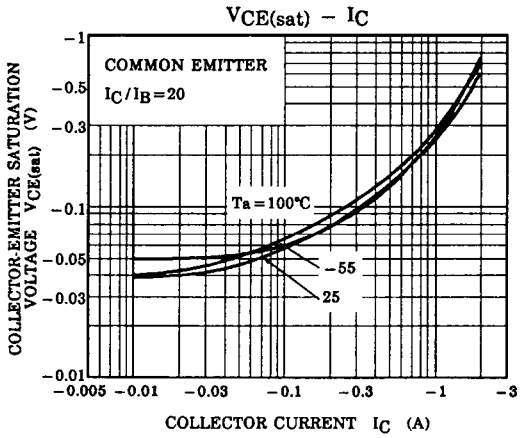
Typical Characteristics

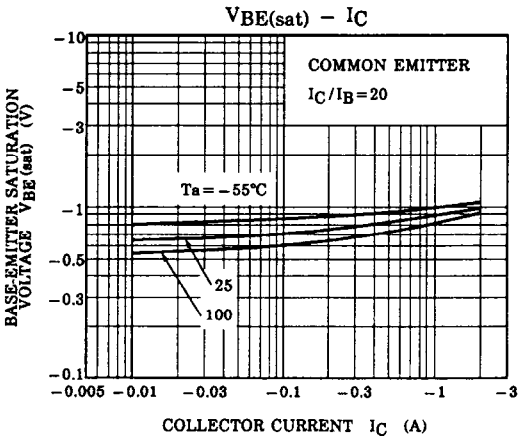












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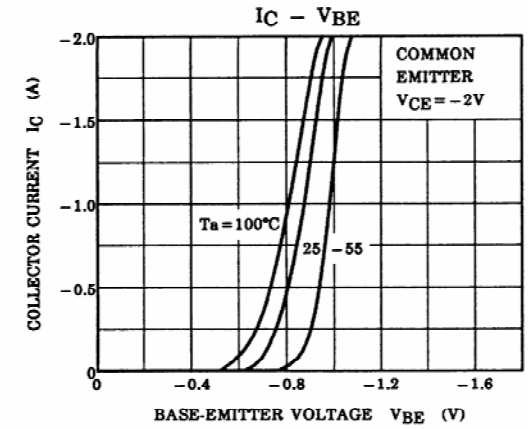
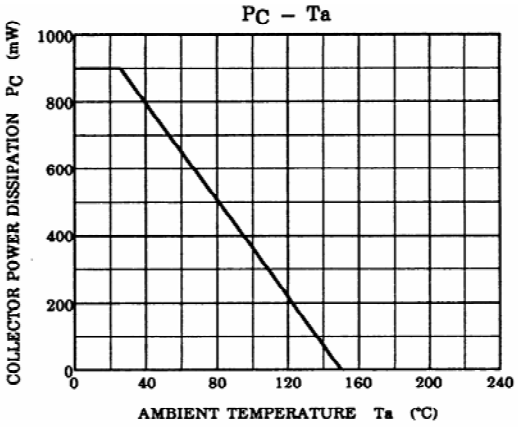
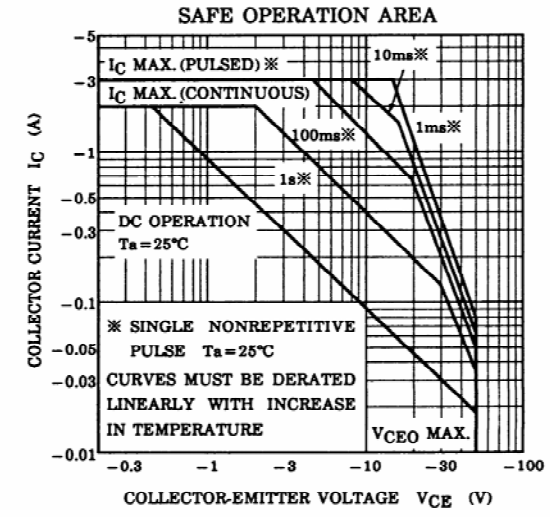
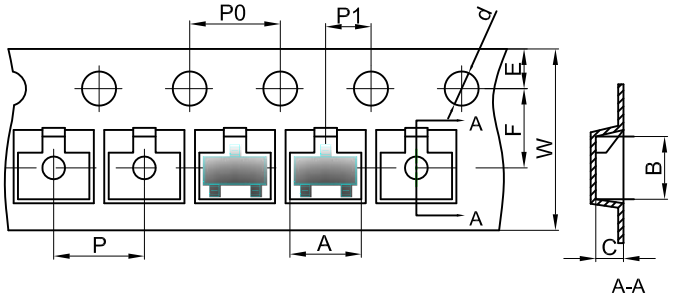






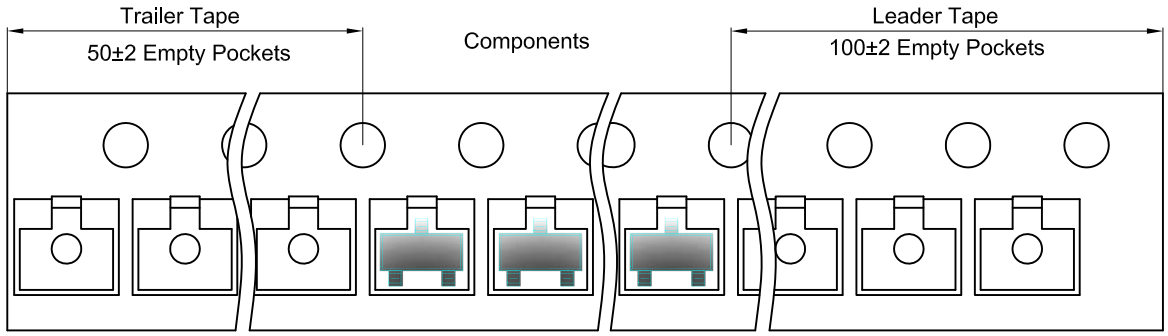
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

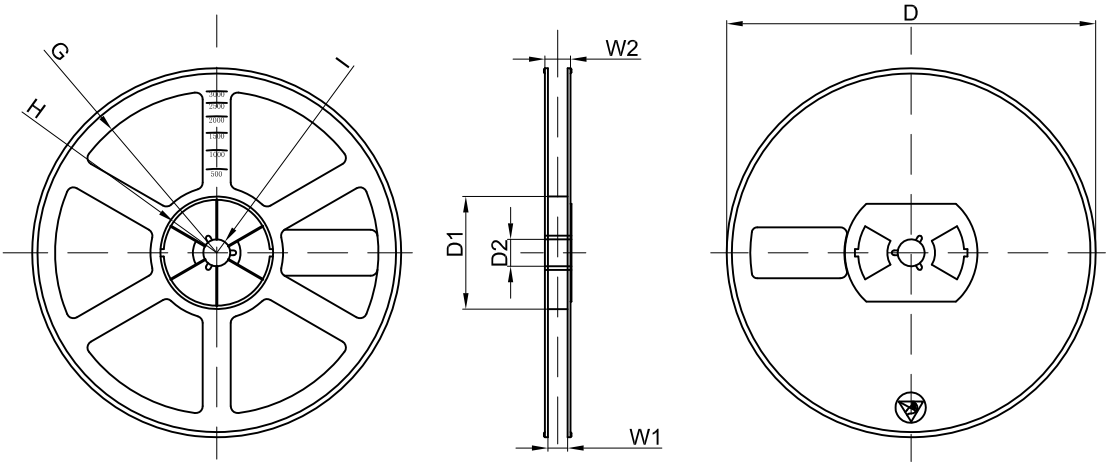


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

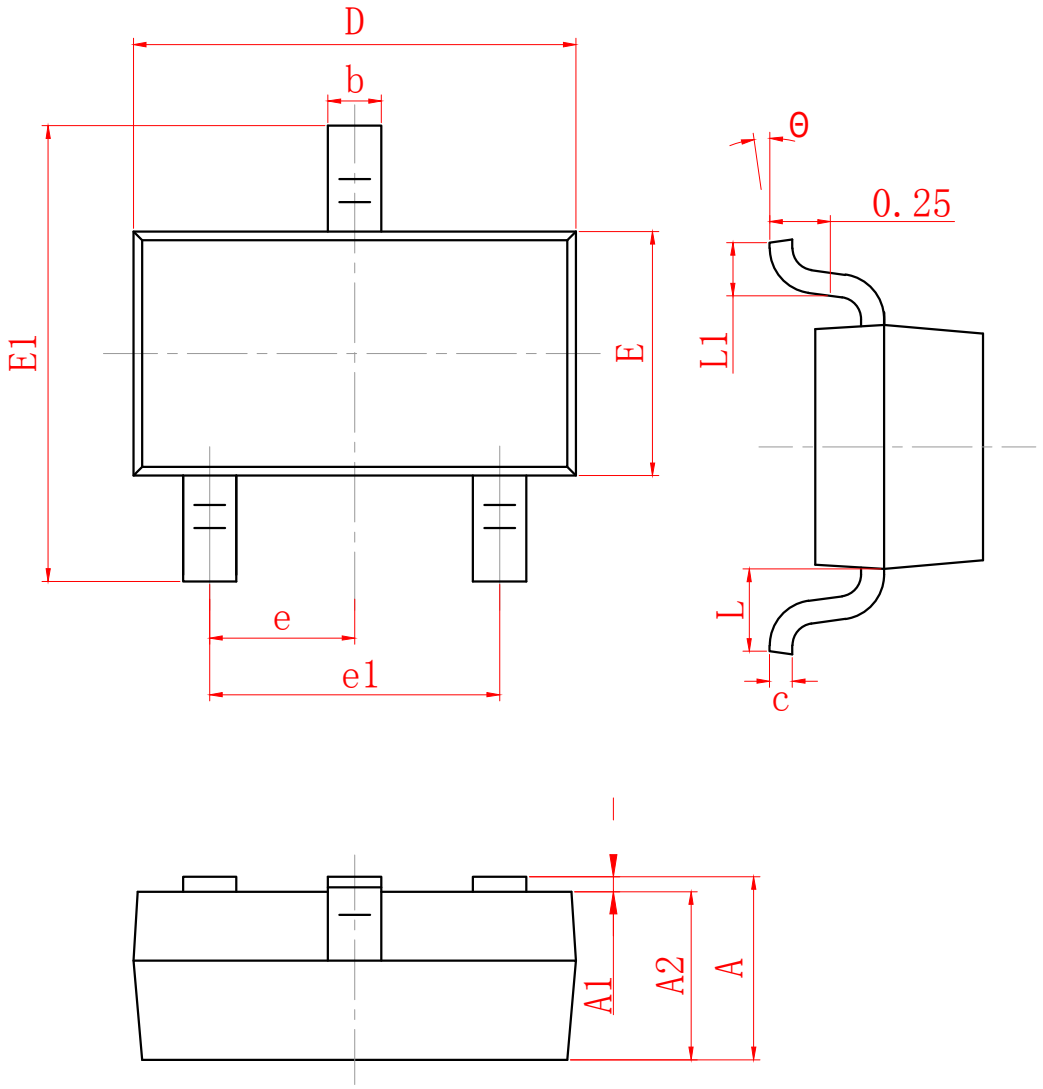


SOT-23 Reel



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	203×203×195	180,000 pcs	438×438×220	



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°

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