

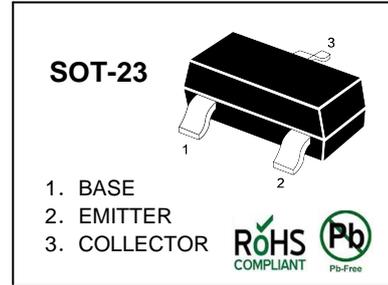
## NPN SILICON TRANSISTOR

### POWER AMPLIFIER APPLICATIONS POWER SWITCHING APPLICATIONS

#### FEATURES

- \* Low saturation voltage:  $V_{CE(SAT)} = 0.5V$  (Max.)
- \* High speed switching time:  $T_{STG} = 1.0\mu s$  (Typ.)

**MARKING : 2655**



#### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ C$ , unless otherwise specified )

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	2	A
Collector Current (Pulse) (Note 1)	$I_{CP}$	3	A
Base Current	$I_B$	0.5	A
Collector Power Dissipation	SOT-23	350	mW
	TO-92	900	
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ C$

Note: 1.  $P_W \leq 16ms$ , Duty Cycle  $\leq 50\%$ .

- 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.

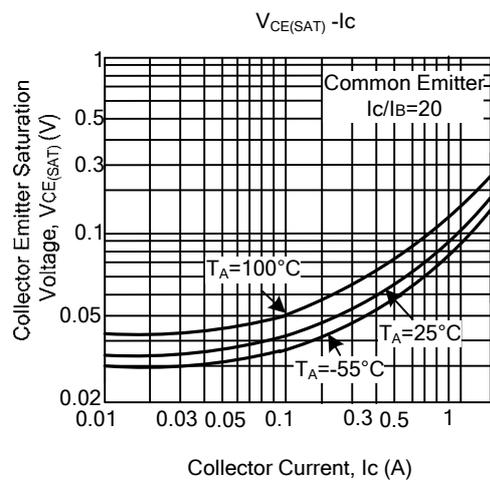
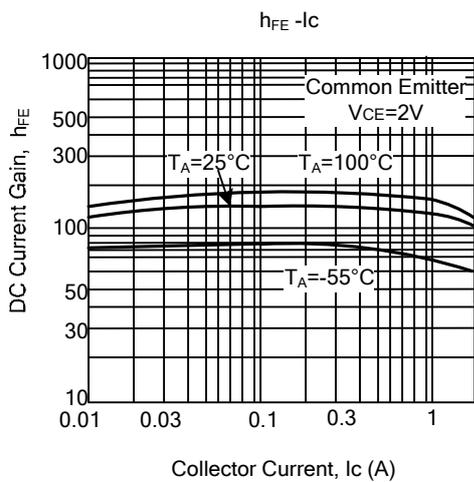
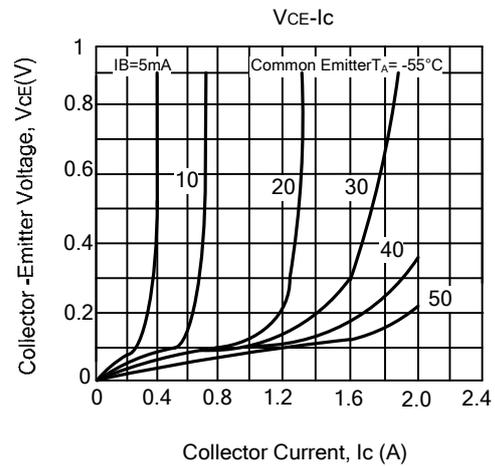
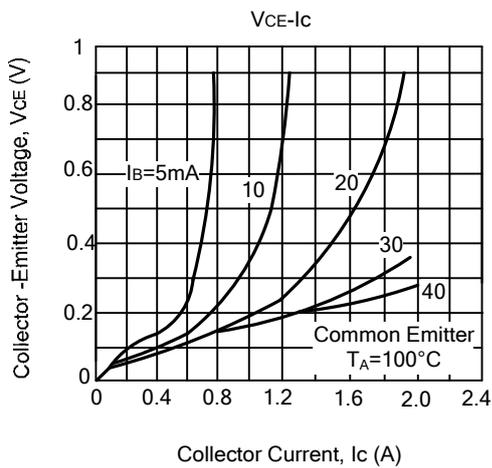
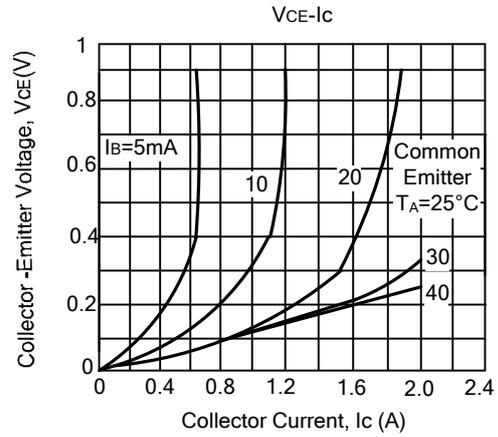
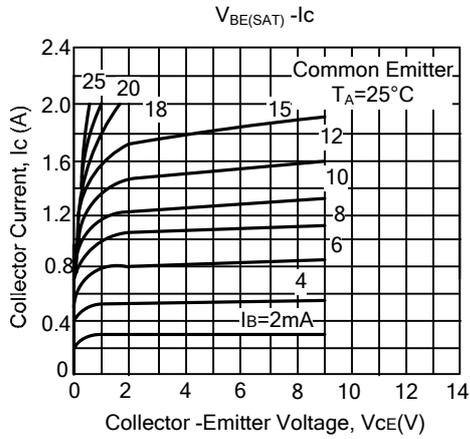
#### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ C$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector 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	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			1.0	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 2V, I_C = 0.5A$	70		240	
	$h_{FE(2)}$	$V_{CE} = 2V, I_C = 1.5A$	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 1A, I_B = 0.05A$			0.5	V
Base- 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	$C_{OB}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$		30		pF
Switching Time(Turn-on Time)	$t_{ON}$	<p><math>I_{B1} = -I_{B2} = 0.05A</math> DUTY CYCLE <math>\leq 1\%</math></p>		0.1		$\mu s$

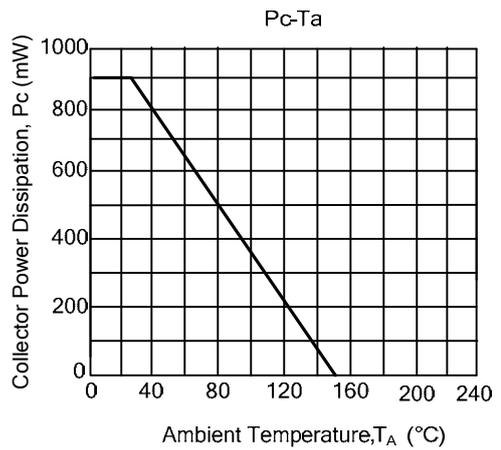
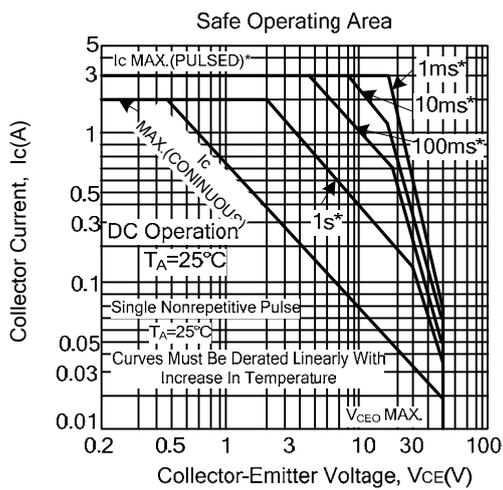
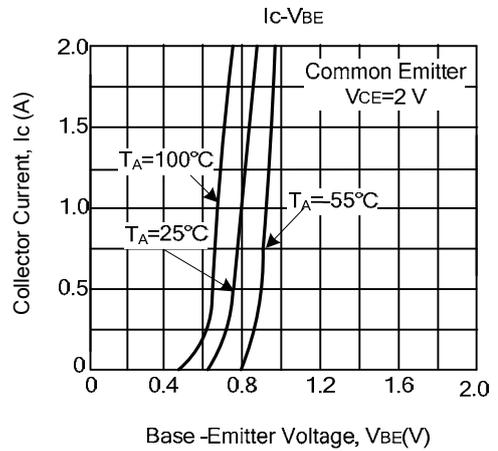
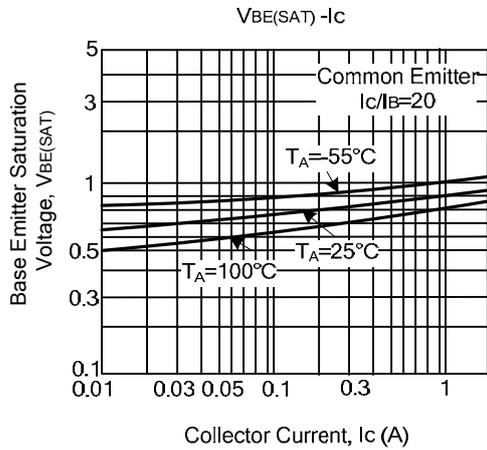
#### CLASSIFICATION OF $h_{FE(1)}$

RANK	O	Y
RANGE	70-140	120-240

## Typical Characteristics

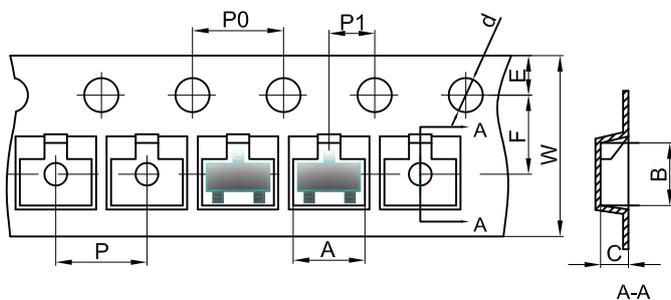


### Typical Characteristics



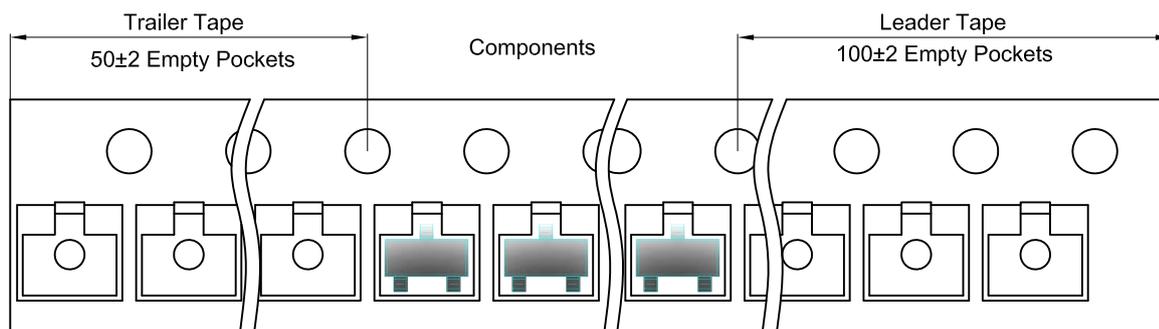
### SOT-23 Tape and Reel

#### SOT-23 Embossed Carrier Tape

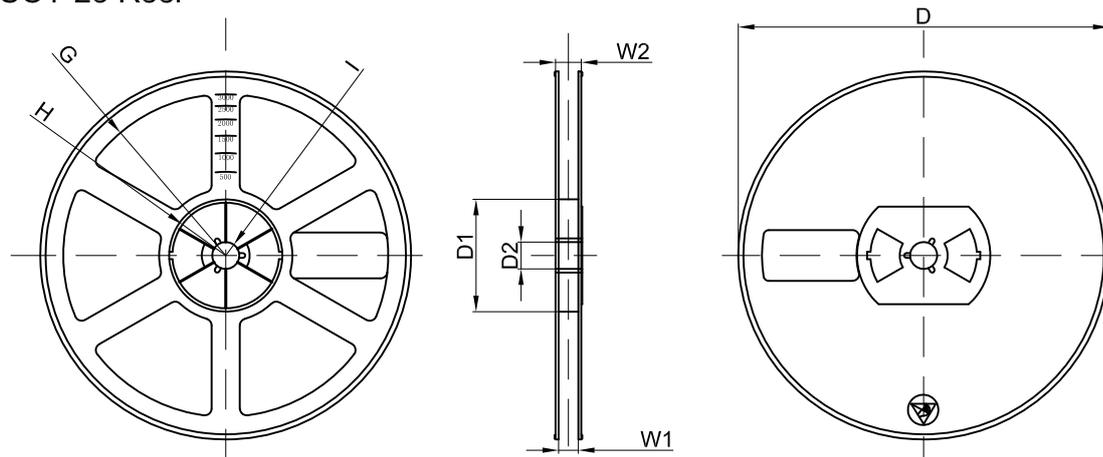


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

#### SOT-23 Tape Leader and Trailer

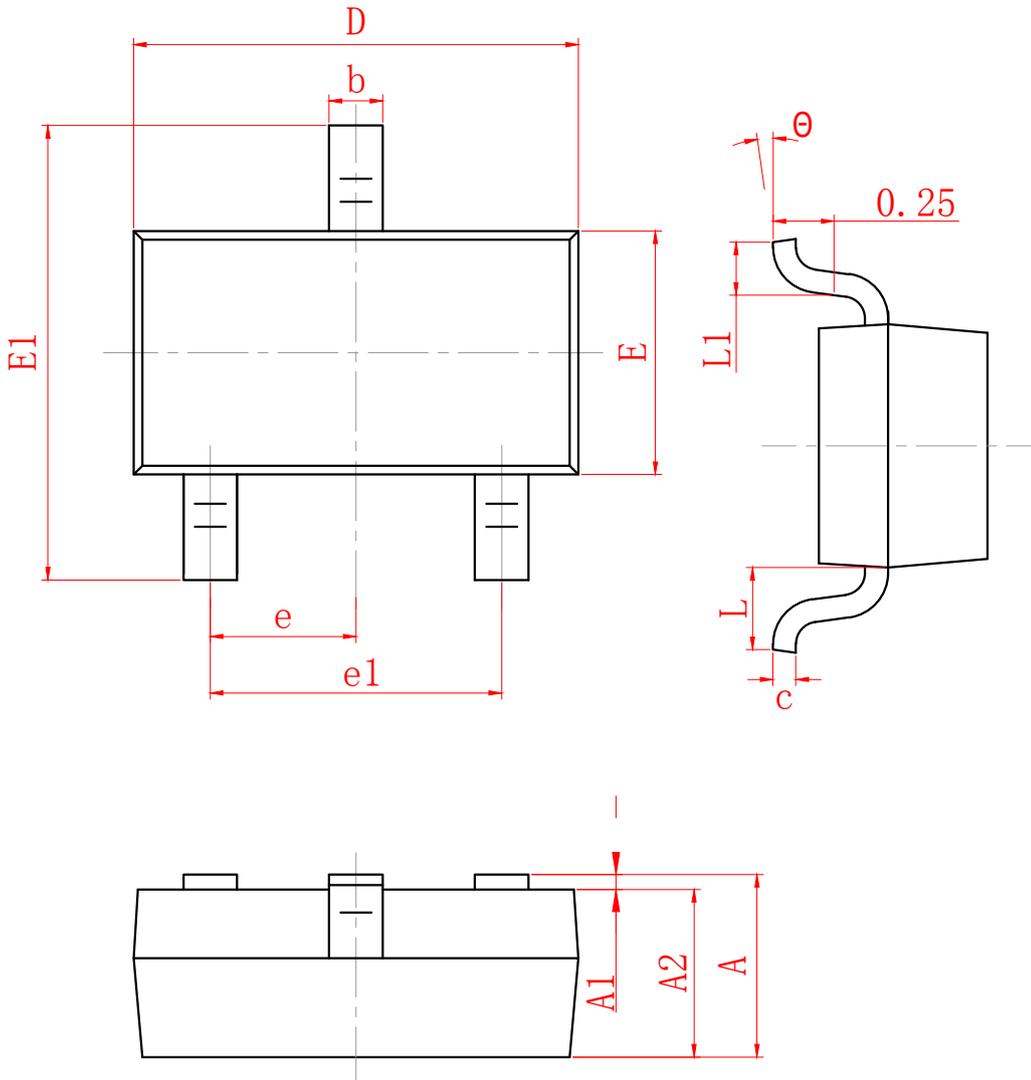


#### SOT-23 Reel



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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