

FEATURES

NPN Transistors

D882

SOT-23



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	25	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	1.5	A
Power Dissipation	P_D	350	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^{\circ}\text{C}$

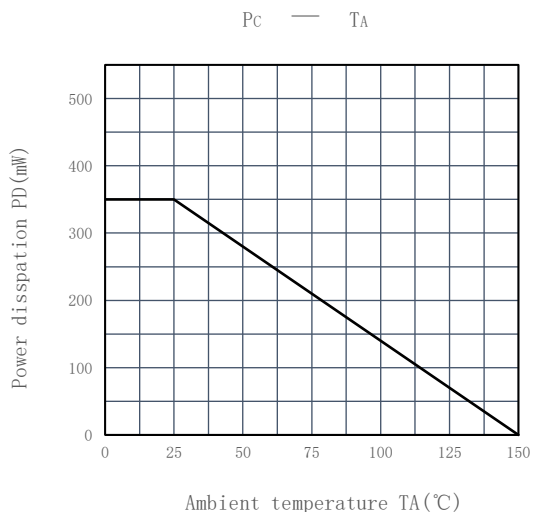
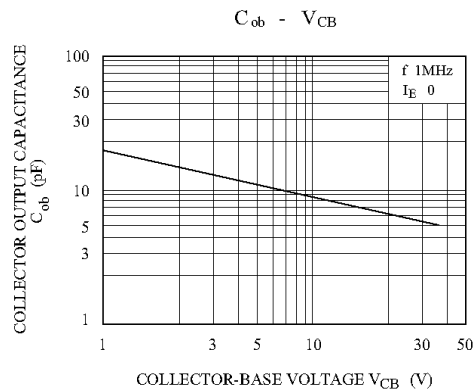
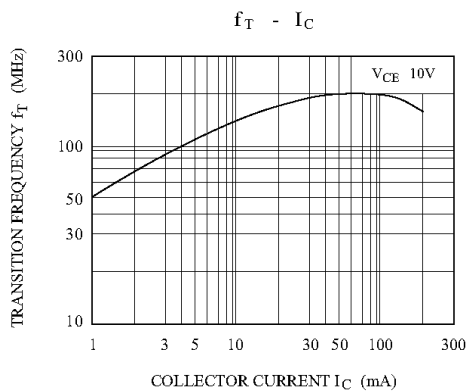
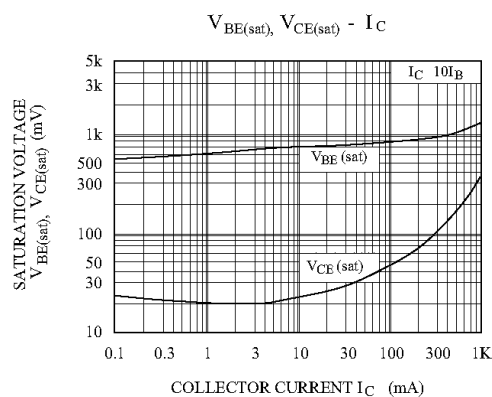
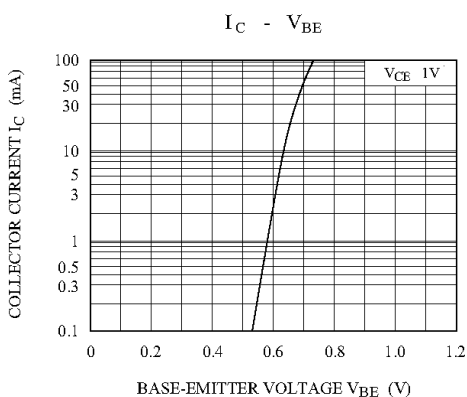
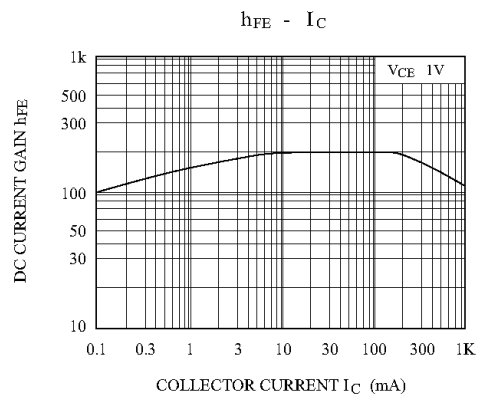
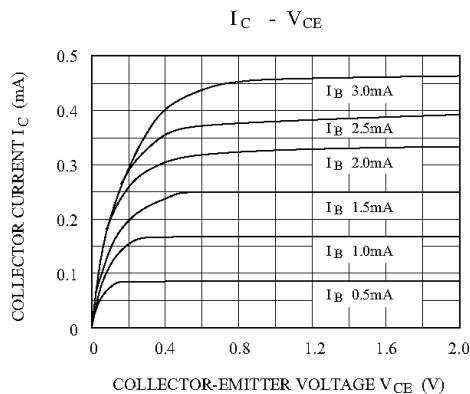
ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _{CE} = 1 V, I _C = 100 mA Current Gain Group at V _{CE} = 1 V, I _C = 800 mA	H _{FE}	160 40	-	320 -	
Collector Base Cutoff Current at V _{CB} = 35 V	I _{CBO}	-	-	100	nA
Emitter Base Cutoff Current at V _{EB} = 6 V	I _{EBO}	-	-	100	nA
Collector Base Breakdown Voltage at I _C = 100 μA	V _{(BR)CBO}	40	-	-	V
Collector Emitter Breakdown Voltage at I _C = 2 mA	V _{(BR)CEO}	25	-	-	V
Emitter Base Breakdown Voltage at I _E = 100 μA	V _{(BR)EBO}	6	-	-	V
Collector Emitter Saturation Voltage at I _C = 800 mA, I _B = 80 mA	V _{CE(sat)}	-	-	0.5	V
Base Emitter Saturation Voltage at I _C = 800 mA, I _B = 80 mA	V _{BE(sat)}	-	-	1.2	V
Base Emitter Voltage at V _{CE} = 1 V, I _B = 10 mA	V _{BE(on)}	-	-	1	V
Transition Frequency at V _{CE} = 10 V, I _C = 50 mA	F _T	120	-	-	MHz

Classification of h_{FE}

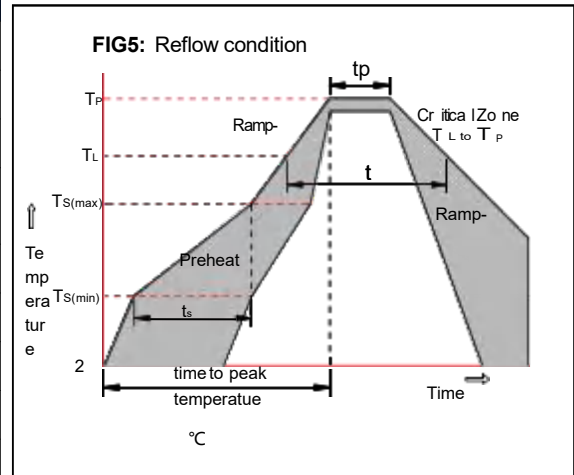
Type	D882S
Range	160-320

RATING AND CHARACTERISTIC CURVES



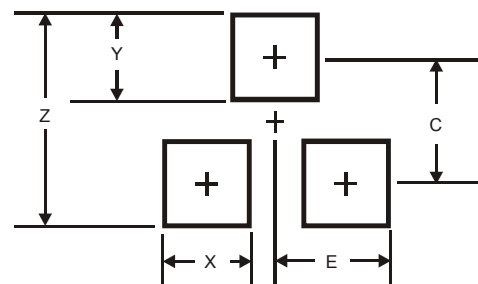
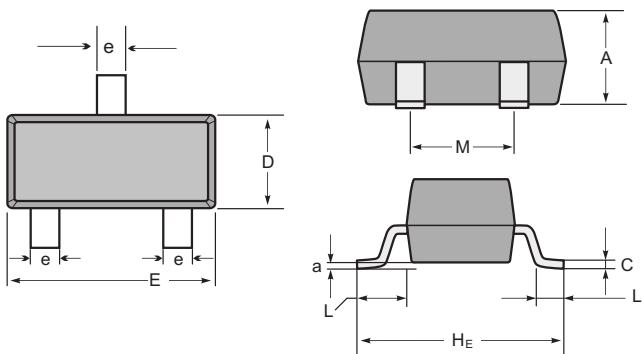
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C



Package Dimensions & Suggested Pad Layout

SOT23

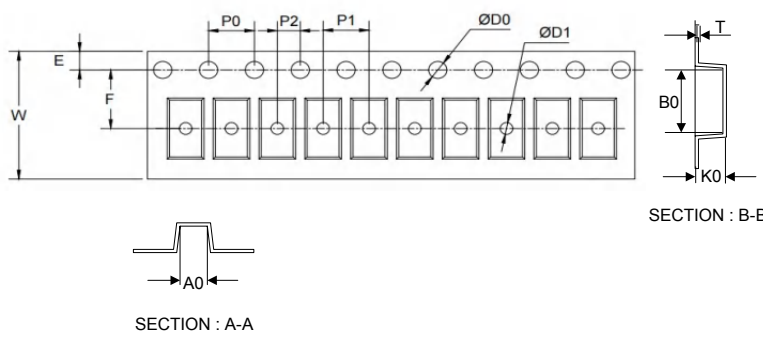


SOT-23 mechanical data

UNIT	A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7		0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)
	min	35	3	47	110	87	12	67		6

Dimensions	SOT23
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

Tape & reel specification

Tape	Symbol	Dimension (mm)
	P0	4.00±0.10
	P1	4.00±0.10
	P2	2.00±0.10
	D0	1.55±0.10
	D1	1.05±0.10
	E	1.55±0.10
	F	3.60±0.10
	W	8.00±0.10
	A0	3.80±0.20
	B0	3.25±0.20
	K0	1.45±0.10
	T	0.25±0.05
	D2	178.0±3.0
	D3	55Min.
	D4	R24.0±3.0
	G	R82.0±3.0
	I	13.0±2.0
	W1	11.0±3.0
	Quantity: 3000PCS	