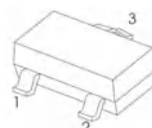


General Description

For Switching and AF Amplifier Applications.

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1.BASE
2.EMITTER
3.COLLECTOR

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

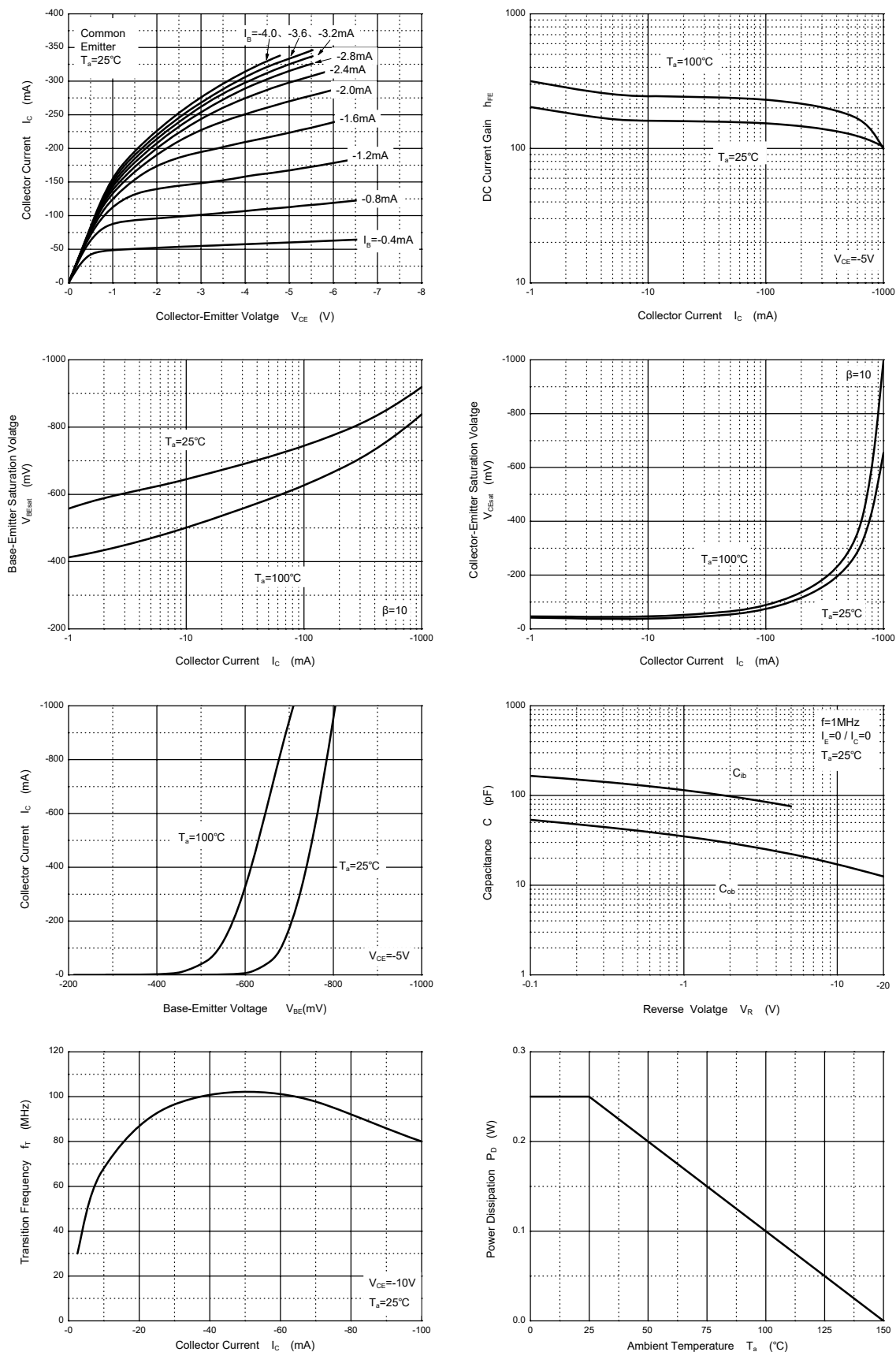
Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	120	V
Collector Emitter Voltage	$-V_{CEO}$	100	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	1	A
Maximum Power Dissipation	P_D	250	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

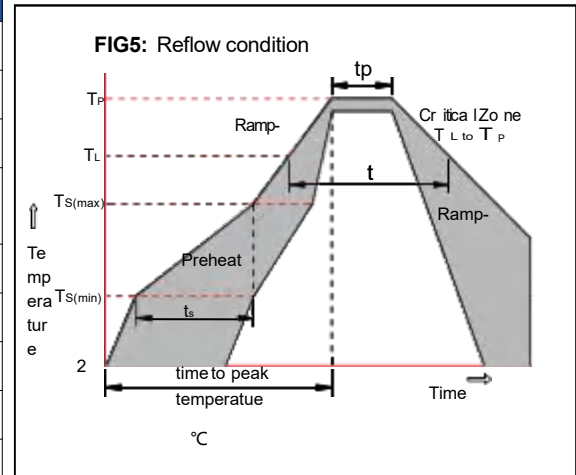
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V _{CE} = -5 V, I _C = -1 mA at V _{CE} = -5 V, I _C = -250 mA at V _{CE} = -5 V, I _C = -0.5 A at V _{CE} = -5 V, I _C = -1 A	H _{FE}	100 100 100 50	-- -- 300 --	--
Collector Base Cutoff Current at V _{CB} = -100V	-I _{CBO}	--	0.1	μA
Collector Emitter Cutoff Current at V _{CES} = -100V	-I _{CES}	--	0.1	μA
Emitter Base Cutoff Current at V _{EB} = -4 V	-I _{EBO}	--	0.1	μA
Collector Base Breakdown Voltage at I _C = -100 μA	-V _{(BR)CBO}	120	--	V
Collector Emitter Breakdown Voltage at I _C = -1 mA	-V _{(BR)CEO}	100	--	V
Emitter Base Breakdown Voltage at I _E = -100 μA	-V _{(BR)EBO}	5	--	V
Collector Emitter Saturation Voltage at I _C = -250 mA, I _B = -25 mA at I _C = -500 mA, I _B = -50 mA	-V _{CE(sat)}	-- --	0.2 0.3	V
Base Emitter Saturation Voltage at I _C = -500 mA, I _B = -50 mA	-V _{BE(sat)}	--	1.1	V
Base Emitter On Voltage at V _{CE} = -5 V, I _C = -1mA	-V _{BE(on)}	--	1	V
Transition Frequency at V _{CE} = -10 V, I _C = -50 mA, f = 100 MHz	F _T	150	--	MHz
Collector Output Capacitance at V _{CB} = -10 V, f = 1 MHz	C _{ob}	--	5	pF

RATING AND CHARACTERISTIC CURVES



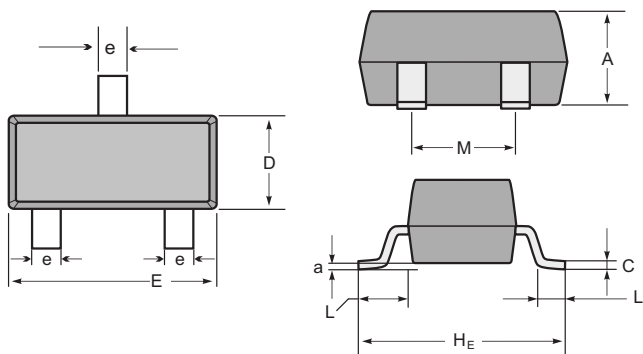
Soldering parameters

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



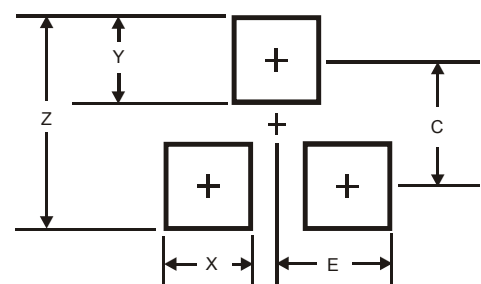
Package Dimensions & Suggested Pad Layout

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)	0.15
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.0
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	6
	min	35	3	47	110	87	12	67			0.0



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

Tape & reel specification

Technical drawing of a tape showing top and side views with dimensions P0, P1, P2, E, F, W, ØD0, ØD1, B0, K0, T, and A0. It includes a section line A-A and a label "SECTION : B-B".

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

Technical drawing of a 7 inch reel showing top and side views with dimensions D2, D3, D4, G, and W1.

Quantity: 3000PCS