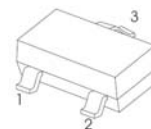


FEATURES

Power switching applications

SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

8D

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

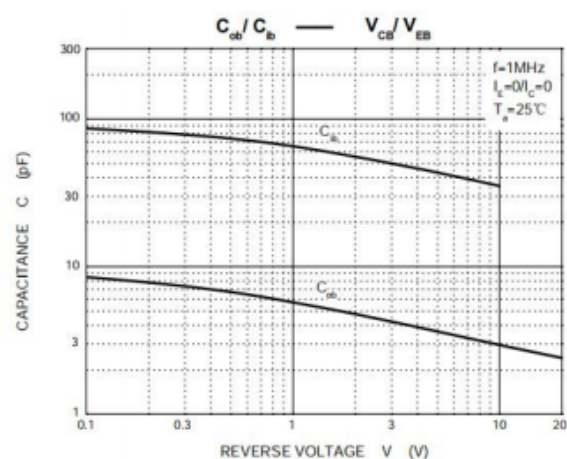
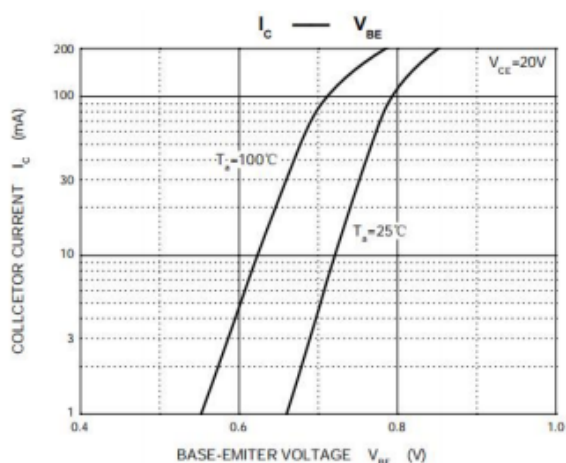
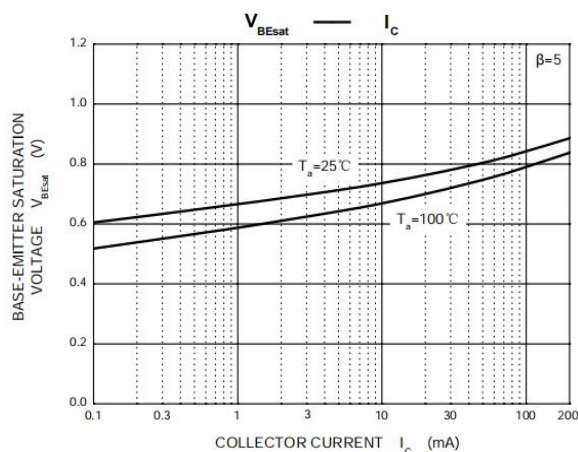
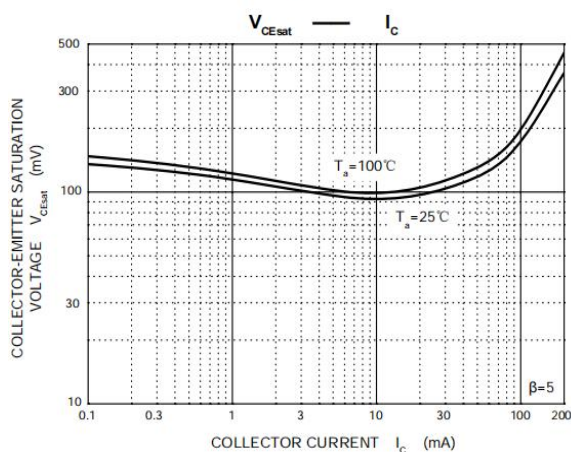
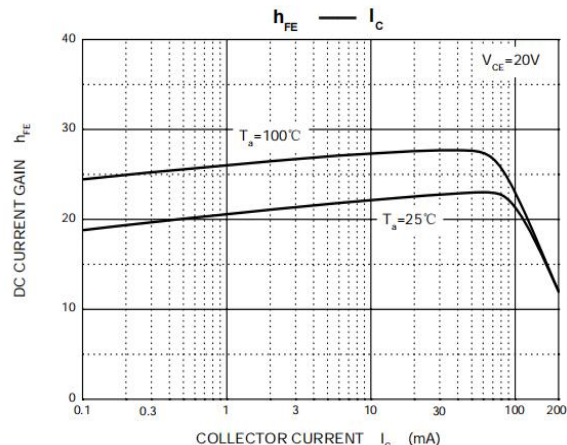
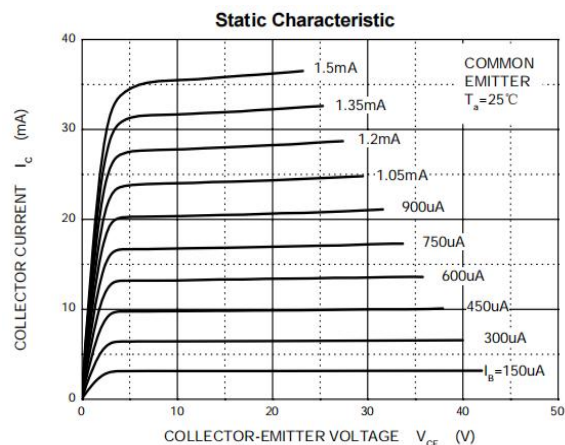
Absolute Maximum Ratings $T_a = 25^{\circ}\text{C}$

Symbol	Parameter	Value	Units
VCBO	Collector-Base Voltage	650	V
VCEO	Collector-Emitter Voltage	450	V
VEBO	Emitter-Base Voltage	9	V
IC	Collector Current -Continuous	0.2	A
PC	Collector Power Dissipation	0.5	W
Tj	Junction Temperature	150	$^{\circ}\text{C}$
Tstg	Storage Temperature	-55-150	$^{\circ}\text{C}$

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

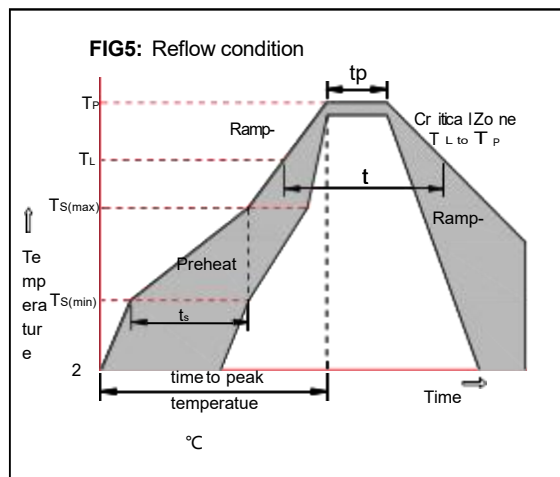
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V(BR)CBO	IC= 100μA, IE=0	650			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	450			V
Emitter-base breakdown voltage	V(BR)EBO	IE=100μA, IC=0	9			V
Collector cut-off current	ICBO	VCB=600 V , IE=0			100	μ A
Collector cut-off current	ICEO	VCE=400V , IB=0			100	μ A
Emitter cut-off current	IEBO	VEB=9V , IC=0			100	μ A
DC current gain	hFE	VCE=10V, IC= 20mA	8		40	
DC current gain	hFE	VCE=5V, IC= 1mA	5			
Collector-emitter saturation voltage	VCE(sat)	IC=50mA, IB= 10mA			0.5	V
Base-emitter saturation voltage	VBE(sat)	IC=50mA, IB= 10mA			1.2	V

RATING AND CHARACTERISTIC CURVES



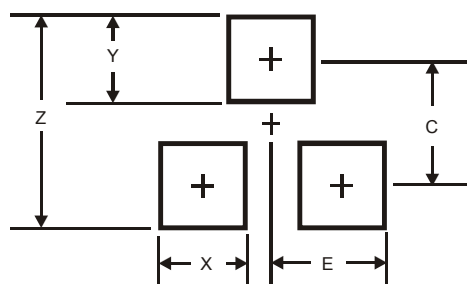
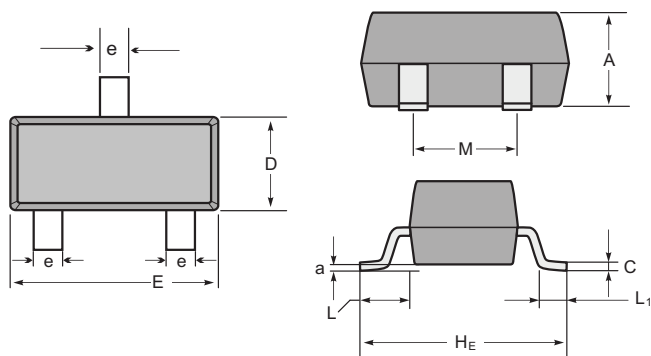
Soldering parameters

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

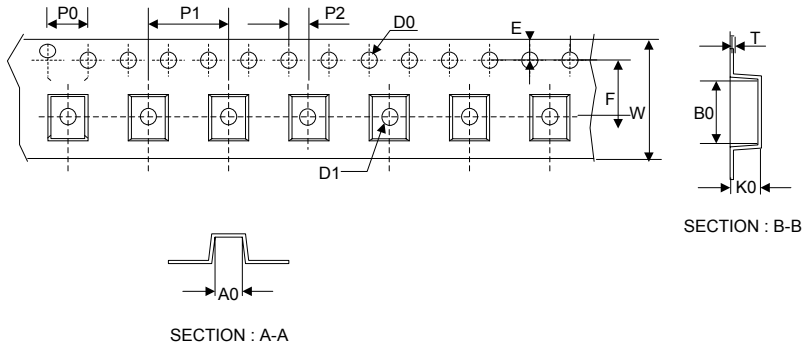
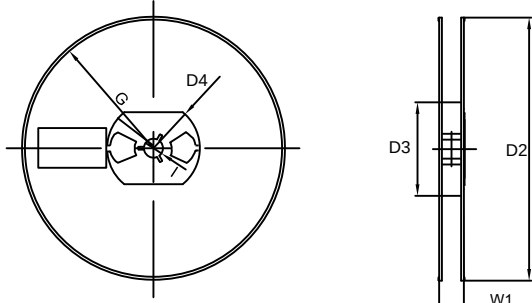


SOT-23 mechanical data

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
7" Reel		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	