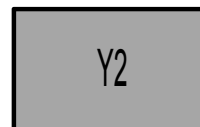
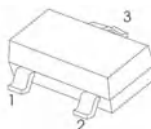


FEATURES

- Collector Current: $I_C=1.5A$

SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_a=25^{\circ}C$ 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}	-5	V
Collector Current — Continuous	I_C	-1.5	A
Collector Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	R_{thJA}	625	$^{\circ}C/W$
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^{\circ}C$

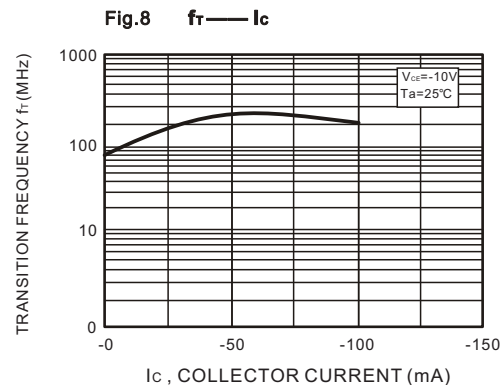
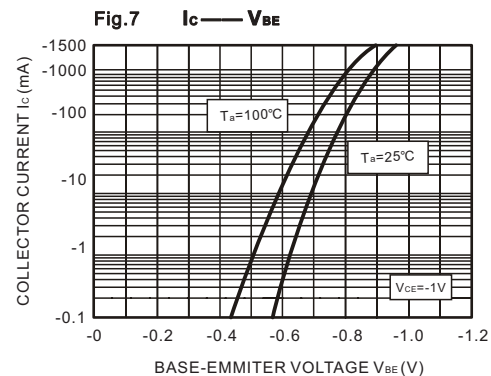
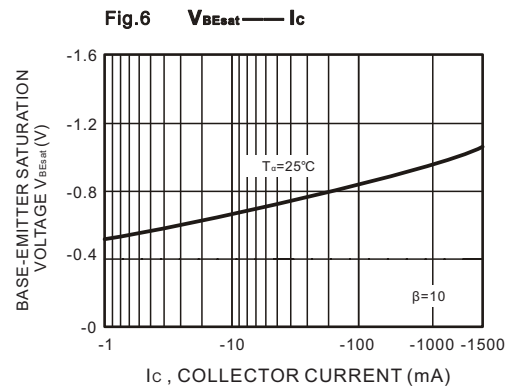
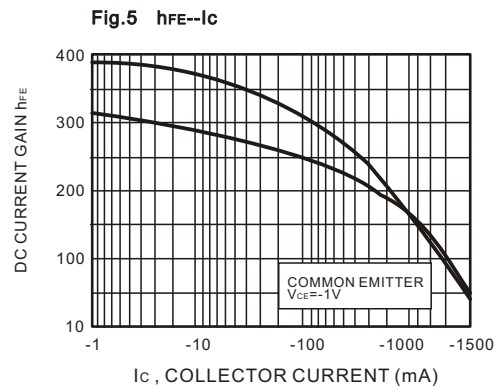
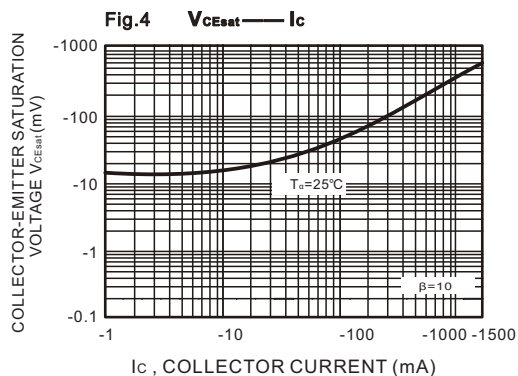
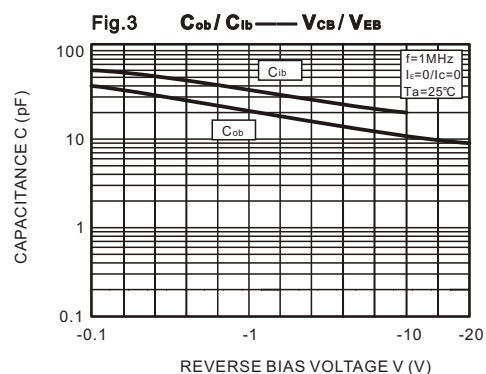
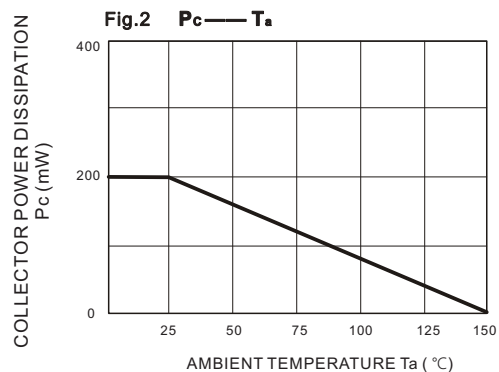
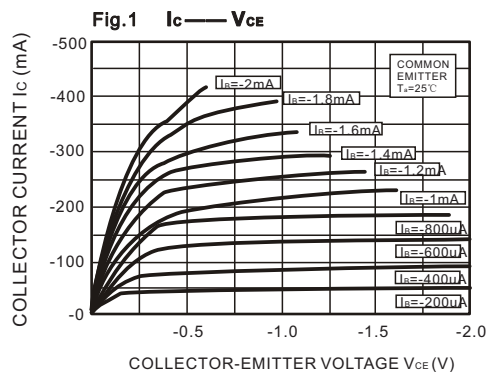
ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -0.1\text{ mA}, I_B = 0$	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -40V, I_E = 0$			-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = -20V, I_B = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.1	μA
DC current gain	h_{FE1}	$V_{CE} = -1V, I_C = -100mA$	120		400	
	h_{FE2}	$V_{CE} = -1V, I_C = -800mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -800mA, I_B = -80mA$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -800mA, I_B = -80mA$			-1.2	V
Base-emitter voltage	V_{BE}	$V_{BE} = -1V, I_C = -10mA$			-1	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -50mA, f = 30MHz$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$			20	

CLASSIFICATION OF h_{FE1}

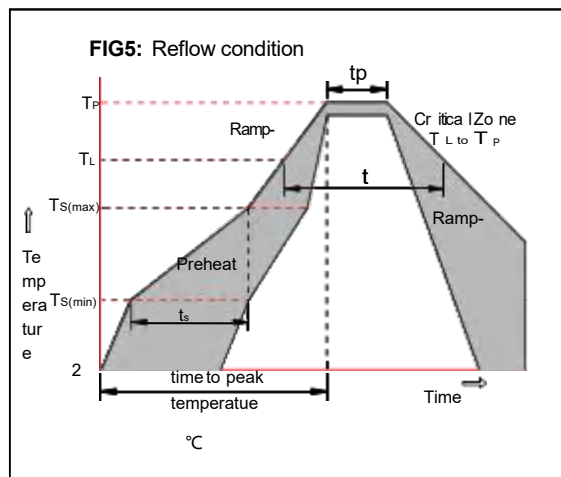
RANK	L	H	J
RANGE	120-200	200-350	300-400
MARKING	Y2		

RATING AND CHARACTERISTIC CURVES



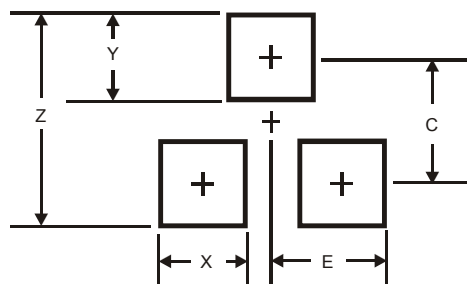
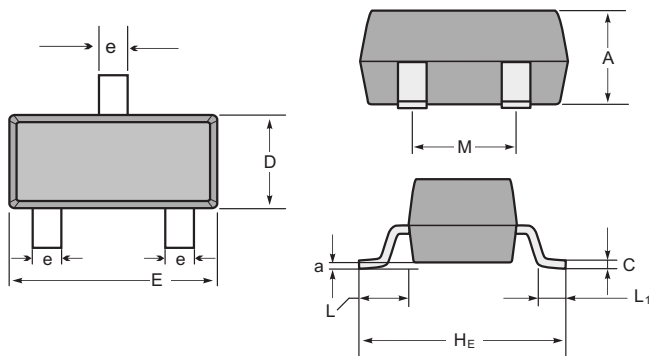
Soldering parameters

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)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7	0.36 (ref)	0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	0.0
	min	35	3	47	110	87	12	67	14 (ref)	6

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

Tape & reel specification

Tape

Technical drawing of a tape component. The top view shows a series of rectangular components with circular features. Dimensions include: $P0$, $P2$, $P1$ (pitch dimensions); $\varnothing D0$, $\varnothing D1$ (diameters); E , F , W (widths); $A0$ (width of the central feature). The side view, labeled "SECTION : B-B", shows the profile of the tape with dimensions T (thickness), $B0$ (height), and $K0$ (width of the base). The bottom view, labeled "SECTION : A-A", shows the cross-section of the tape with dimension $A0$.

7" Reel

Technical drawing of a 7-inch reel. The top view shows a circular reel with a central hub and a rectangular component. Dimensions include: $D4$ (diameter of the reel); G (radius of the central hub). The side view shows the profile of the reel with dimensions $D3$ (height of the central hub), $D2$ (height of the reel), and $W1$ (width of the reel).

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