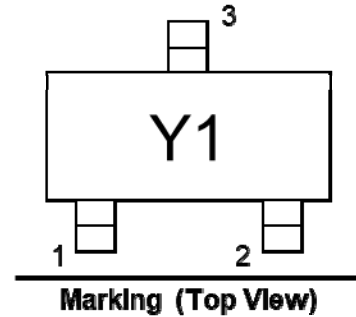
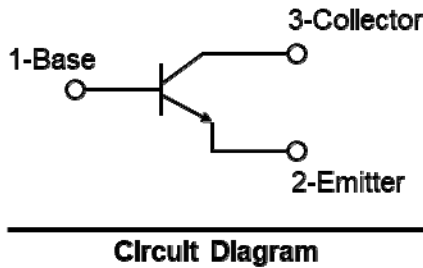


### Feature

This device is Pb-Free, Halogen Free/BFR Free and RoHS compliant.



### Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness : ≤3mil

### Structure

NPN epitaxial planar silicon transistor (Resistor built-in type)

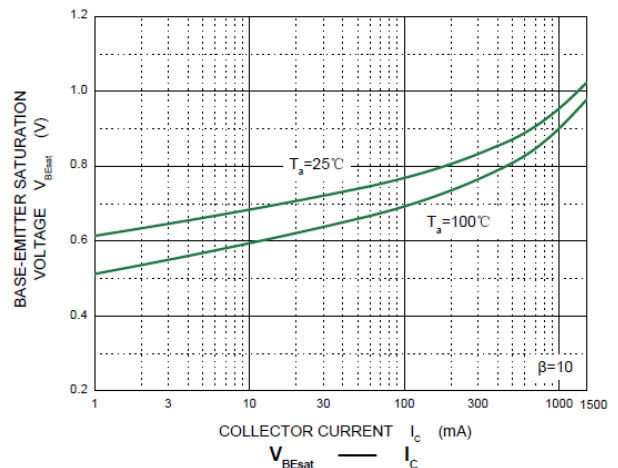
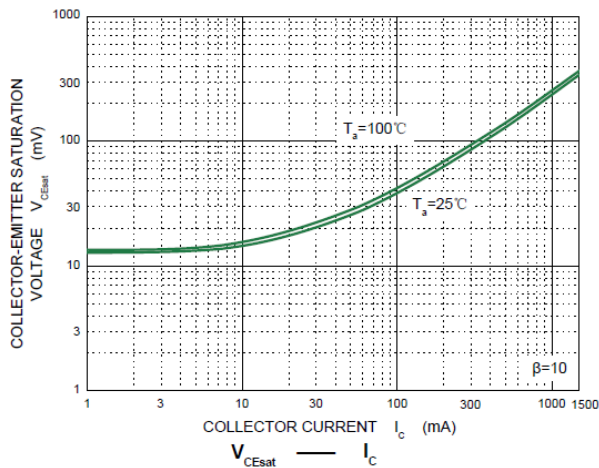
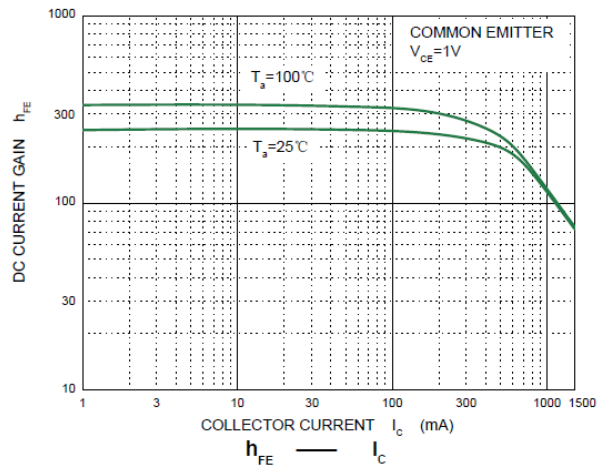
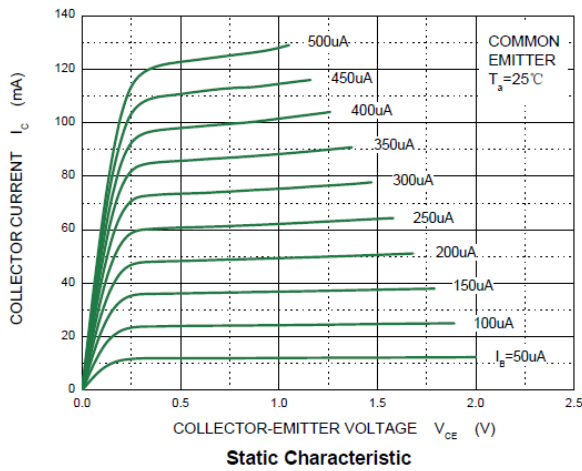
### Absolute maximum rating@25°C

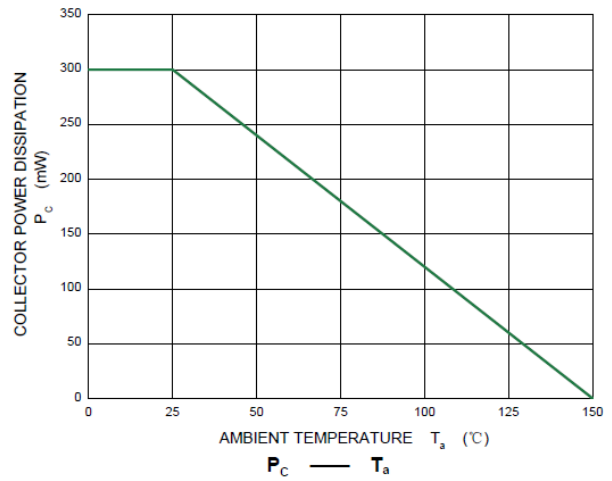
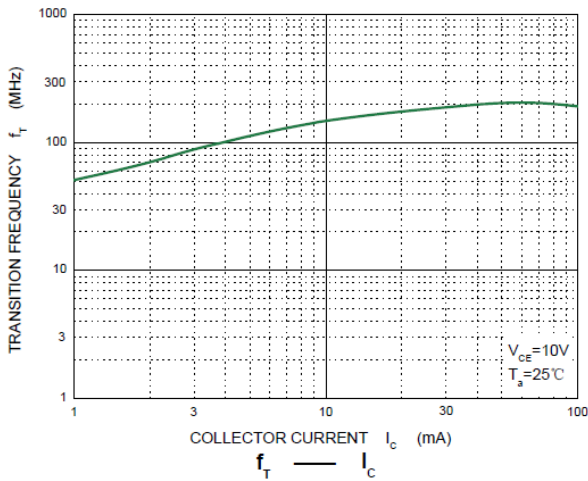
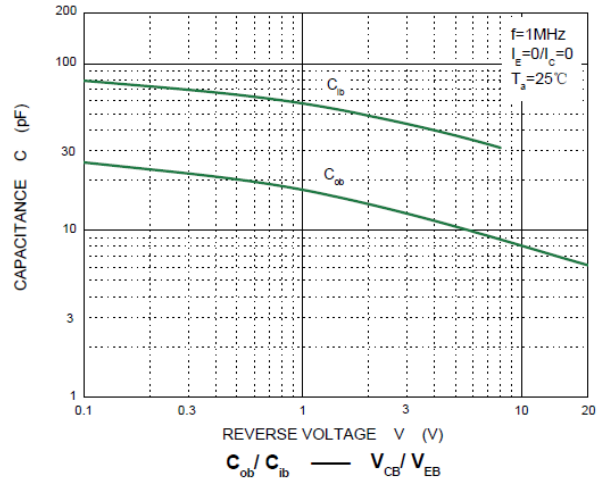
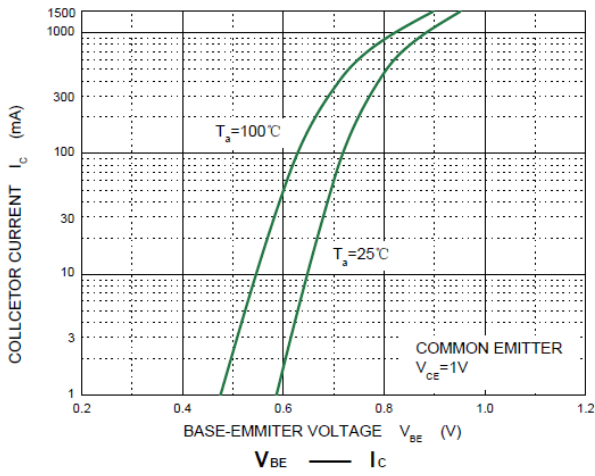
Parameter	Symbol	Value	Units
Collector-Base Voltage	$V_{CBO}$	40	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	1.5	A
Collector Power Dissipation	$P_C$	300	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

Electrical characteristics per line@25°C ( unless otherwise specified)

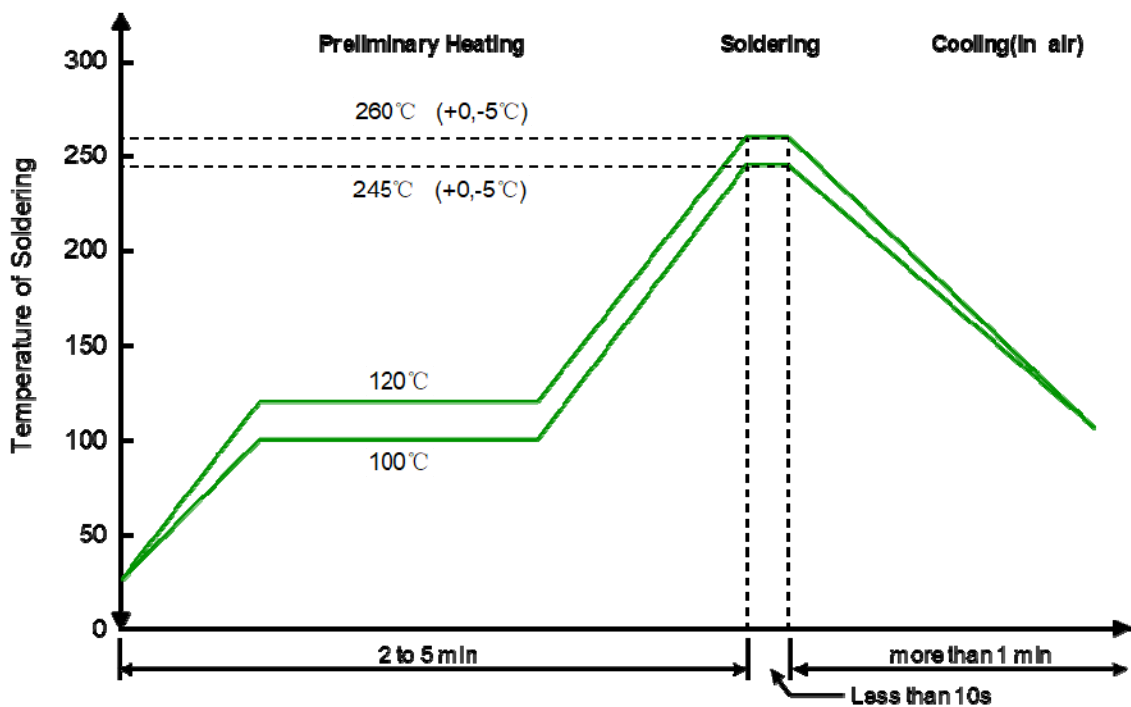
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
DC Current Gain	$h_{FE}$	$I_C=50mA, V_{CE}=1.0V$	200		350	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$	-		0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=2.0mA, I_B=0$	25			V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	40			V
Emitter -Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	6.0			V
Base Cutoff Current	$I_{BL}$	$V_{CB}=35V$			50	nA
Collector Current	$I_C$			1.5		A

Typical Characteristics



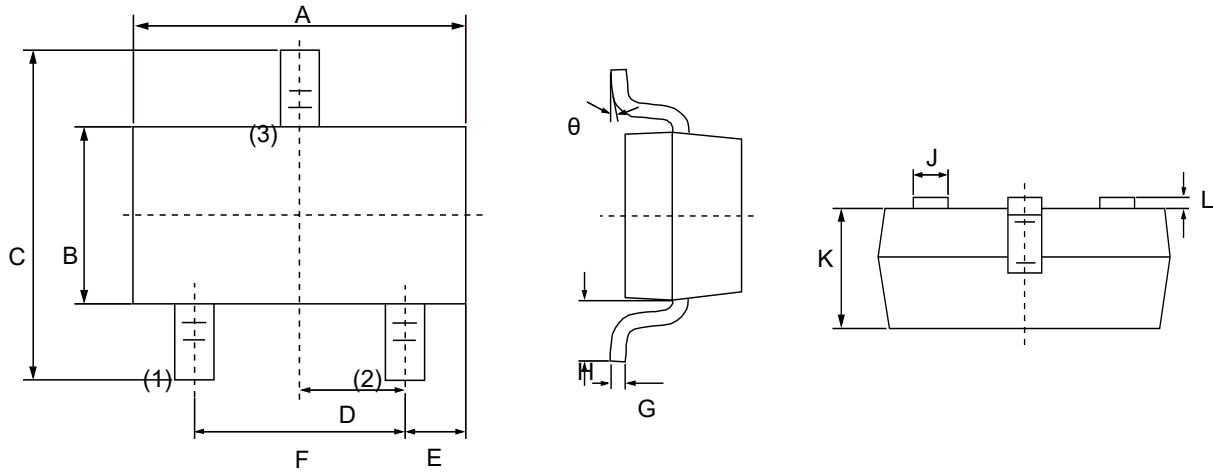


Solder Reflow Recommendation

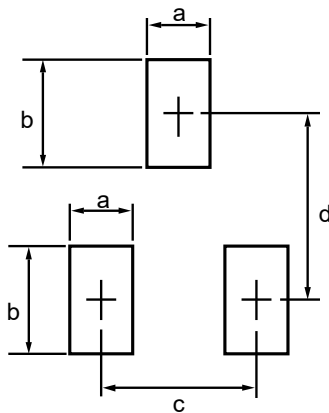


Remark: Pb free for 260°C. Pb for 245°C.

Product dimension (SOT-23)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	2.80	3.00	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	2.10	2.50	0.0830	0.0984
D	0.89	1.02	0.0350	0.0401
E	0.45	0.60	0.0177	0.0236
F	1.78	2.04	0.0701	0.0807
G	0.085	0.177	0.0034	0.0070
H	0.45	0.60	0.0180	0.0236
J	0.37	0.50	0.0150	0.0200
K	0.89	1.11	0.0350	0.0440
L	0.013	0.100	0.0005	0.0040
$\theta$	0°	10°	0°	10°




Dim	Millimeters	
	MIN	MAX
a	--	0.7
b	--	1.2
c	--	2.04
d	--	2.2

Ordering information

Device	Package	Shipping
PT23T8050	SOT-23	3000 / Tape & Reel


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