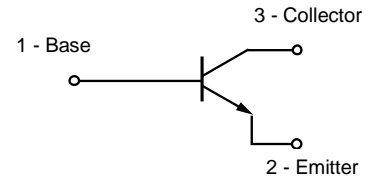


Feature

- 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)

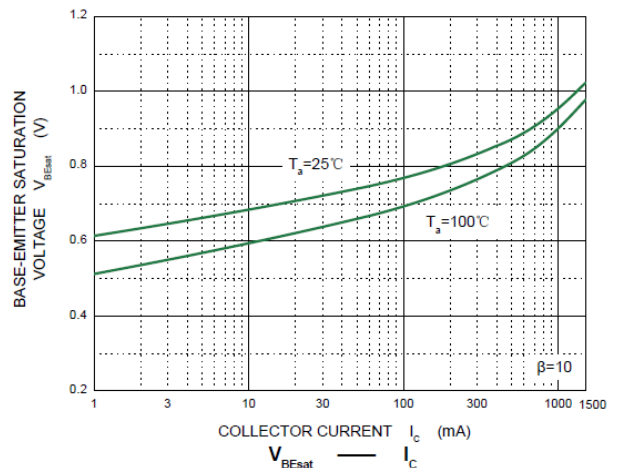
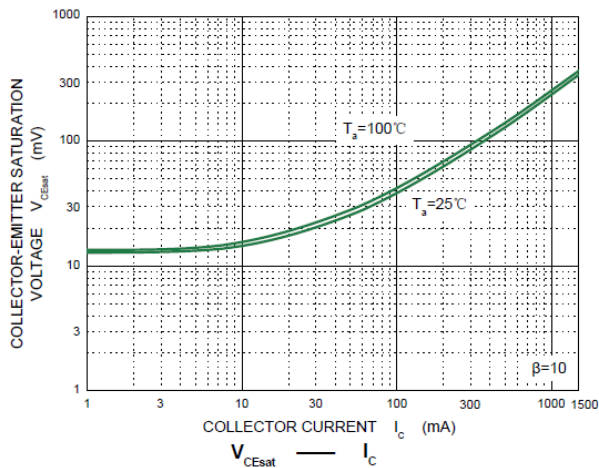
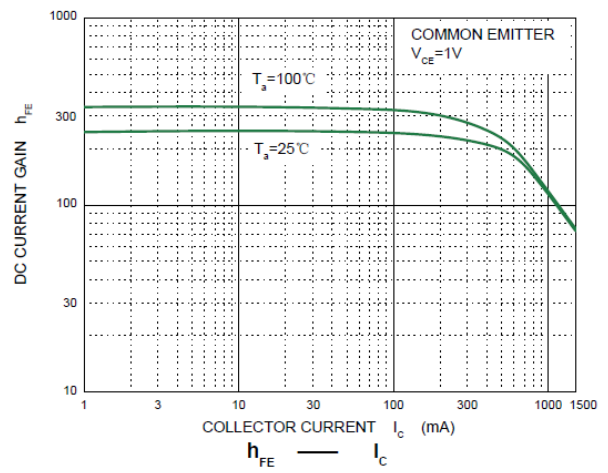
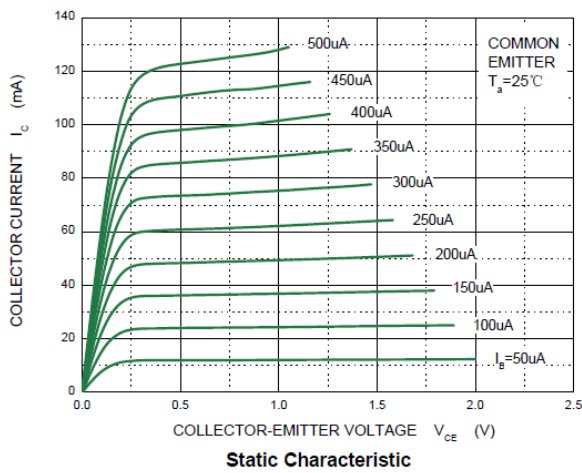
Absolute maximum rating@25°C

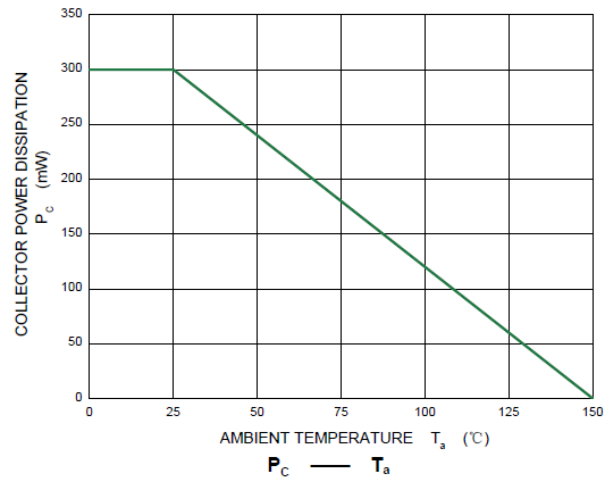
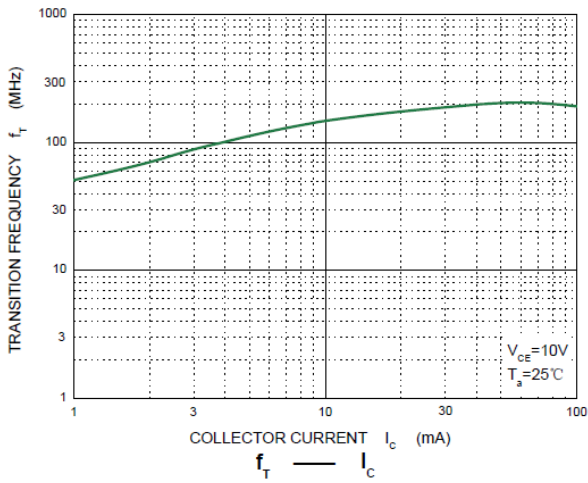
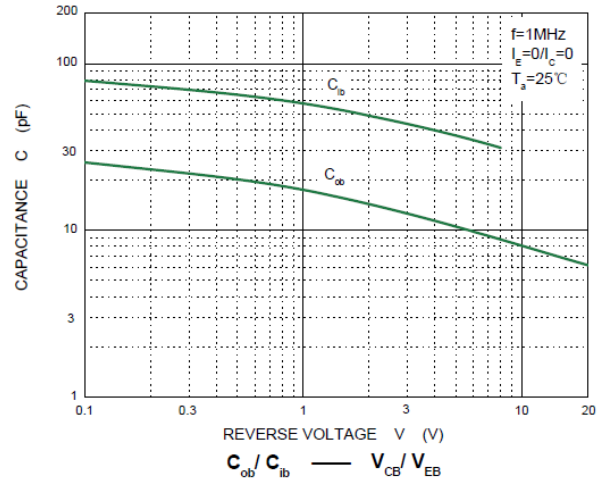
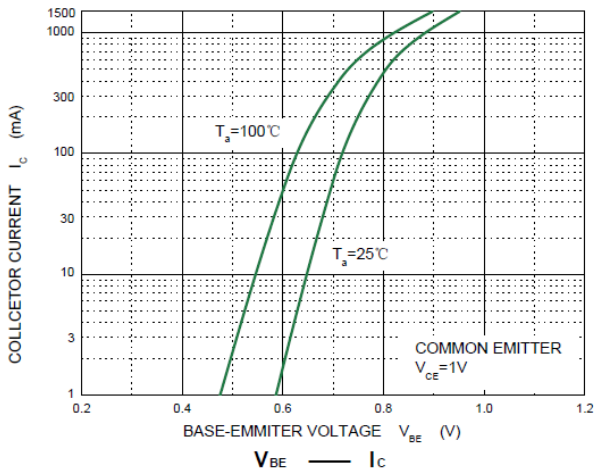
Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1.5	A
Collector Power Dissipation	P_C	300	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	T_j	150	°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	$V_{(BR)CBO}$	$I_C=10uA, I_E=0$	40			V
Emitter -Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100uA, I_C=0$	6.0			V
Base Cutoff Current	I_{BL}	$V_{CB}=35V$			50	nA
Collector Current	I_C			1.5		A

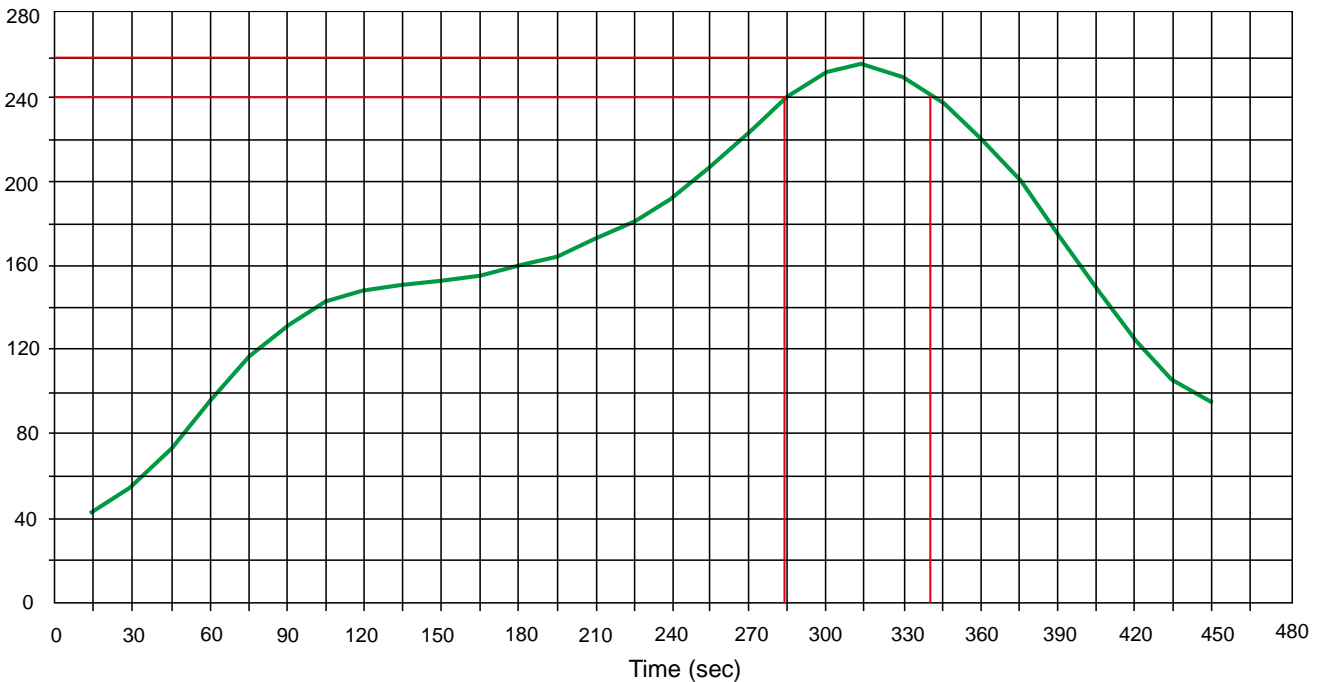
Typical Characteristics

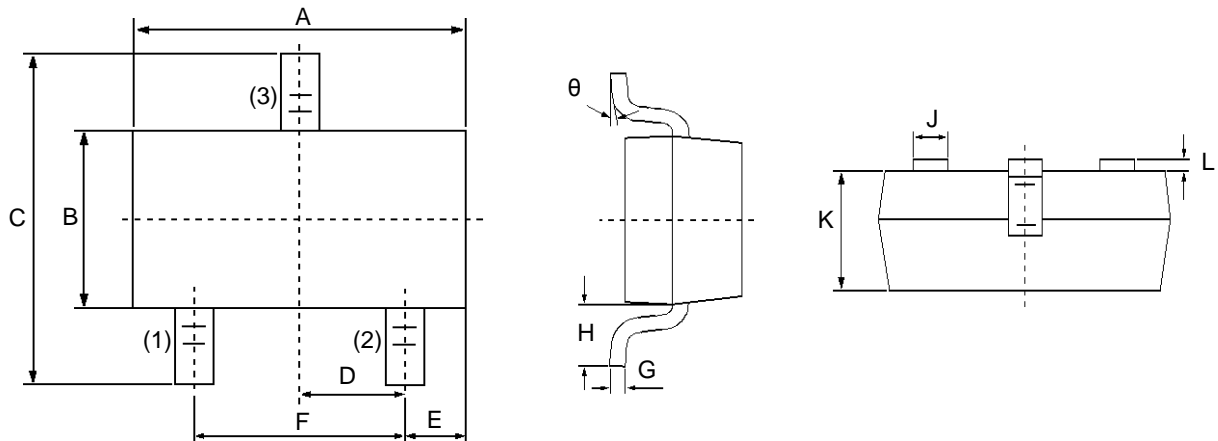




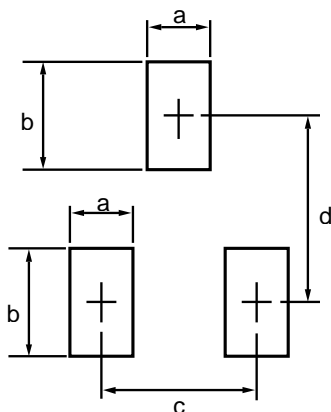
Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec





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
θ	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 (Pb-Free)	3000 / Tape & Reel


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