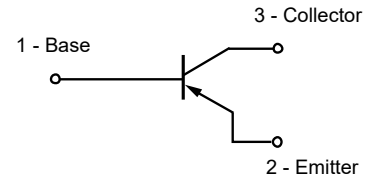


Feature

- PNP epitaxial planar silicon transistor


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

Absolute maximum rating@25°C

Parameter	Symbol	Value	Units
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60	V
Emitter -Base Breakdown Voltage	$V_{(BR)EBO}$	-5.0	V
Collector Current - Continuous	I_C	-600	mA
Total Device Dissipation	P_D	250	mW
Thermal Resistance, Junction to Ambient	R_{qJA}	500	°C/W
Operating and Storage Junction Temperature Range	T_J T_{Stg}	-55to+150	°C

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60	-	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10uA, I_E = 0$	-60	-	-	V
Emitter -Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10uA, I_C = 0$	-5.0	-	-	V
Collector Cut-off Current	I_{CEX}	$V_{CE} = -30V, V_{BE(off)} = -0.5V$	-50	-	-	nA
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50V, I_E = 0V$	-	-	-20	nA
Base Cut-off Current	I_{EBO}	$V_{EB} = -3V, I_C = 0$	-	-	-50	nA
ON CHARACTERISTICS						
DC Current Gain	h_{FE}	$I_C = -10mA, V_{CE} = -10V$	100	-	-	-
		$I_C = -150mA, V_{CE} = -10V$	100	-	300	
		$I_C = -500mA, V_{CE} = -10V$	50	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$	-	-	-0.4	V
		$I_C = -500mA, I_B = -50mA$	-	-	-1.6	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$	-	-	-1.3	V
		$I_C = -500mA, I_B = -50mA$	-	-	-2.6	
SMALL SIGNAL CHARACTERISTICS						
Current-Gain-Bandwidth Product	f_T	$I_C = -50mA, V_{CE} = -20V,$ $f = 100MHz$	200	-	-	MHz
SWITCHING CHARACTERISTICS						
Delay Time	t_d	$V_{CE} = -30V, I_C = -150mA,$ $I_{B1} = -15mA$	-	-	10	ns
Rise Time	t_r		-	-	25	
Storage Time	t_s	$V_{CE} = -6V, I_C = -150mA,$ $I_{B1} = I_{B2} = -15mA$	-	-	225	ns
Fall Time	t_f		-	-	60	

Typical Characteristics

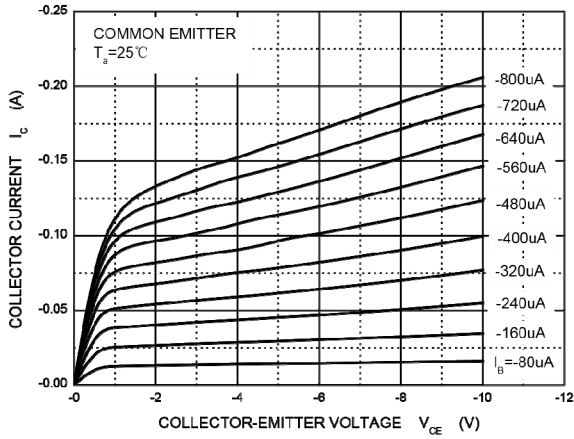


Fig 1. Static Characteristic

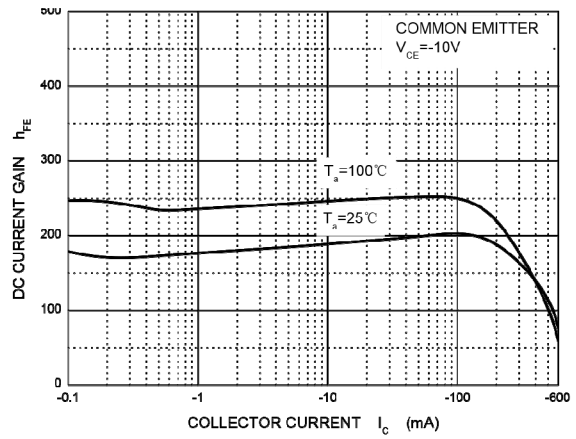


Fig 2. h_{FE} — I_c

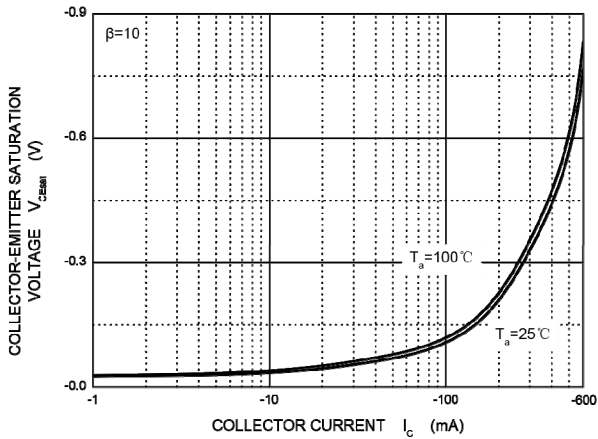


Fig 3. $V_{CE(sat)}$ — I_c

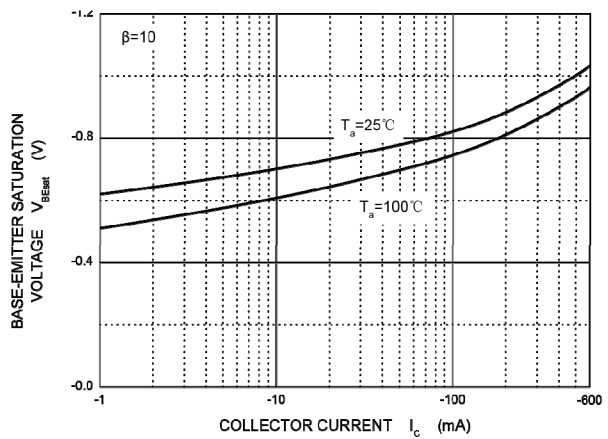


Fig 4. $V_{BE(sat)}$ — I_c

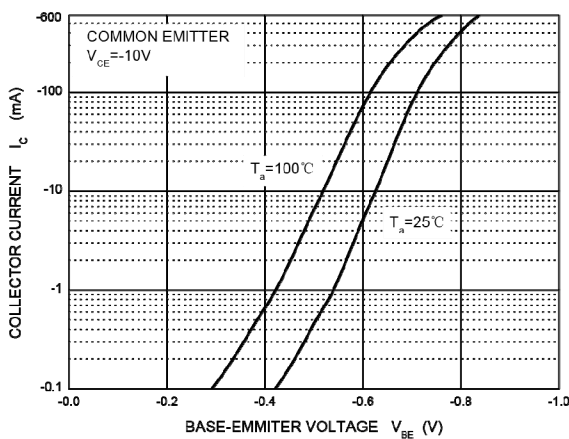


Fig 5. I_c — V_{BE}

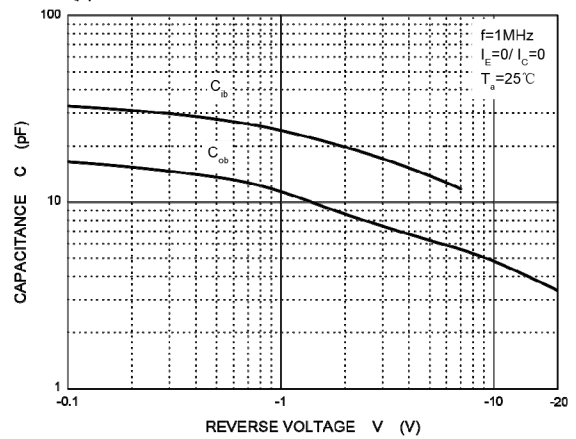


Fig 6. C_{ob}/C_b — V_{CB}/V_{EB}

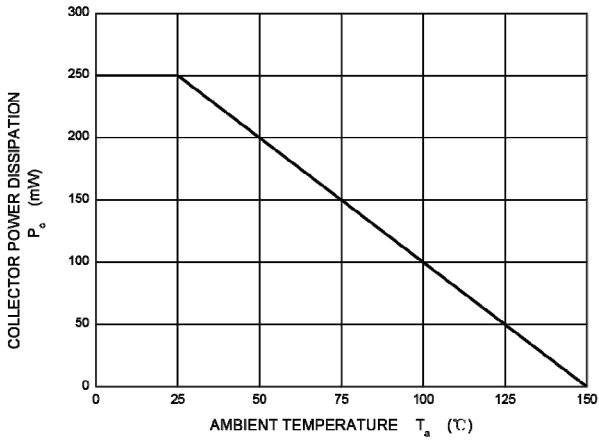
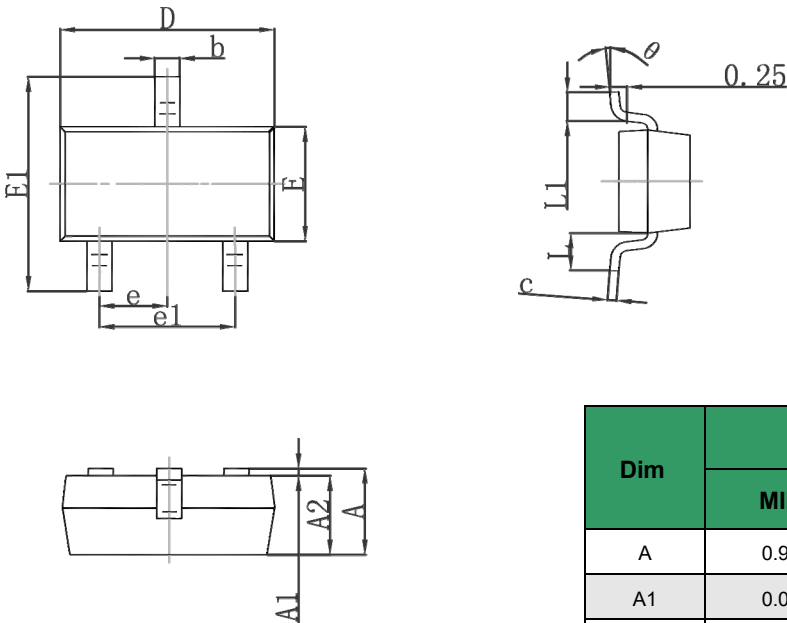
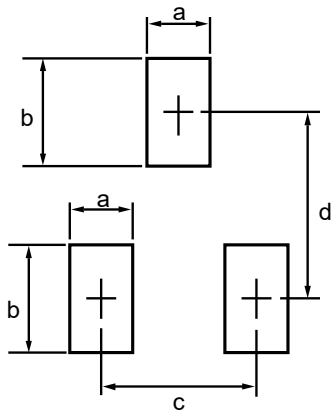


Fig 7. P_c — T_a

Product dimension(SOT-23)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.95 TYP		0.037 TYP	
e1	1.80	2.00	0.071	0.079
L	0.55 REF		0.022 REF	
L1	0.30	0.50	0.012	0.020
θ	0°	8°	0°	8°

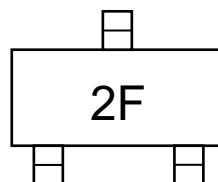


Dim	Millimeters	
	MIN	MAX
a	--	0.7
b	--	0.9
c	--	2.0
d	--	2.1


Ordering information

Device	Package	Shipping
PT23T2907A	SOT-23 (Pb-Free)	3000 / Tape & Reel

Marking information




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