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TPPZT2907A

PNP Silicon Epitaxial Planar Transistor

www.sot23.com.tw

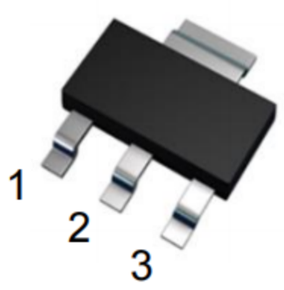
Features

- High Collector Current
- Low Collector-emitter Saturation Voltage

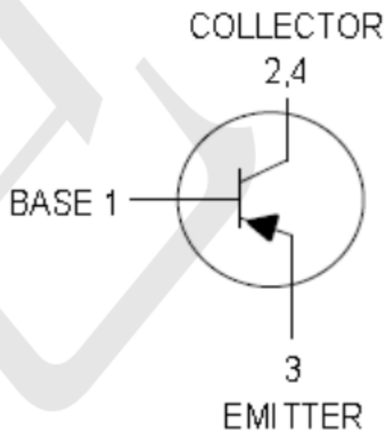
Mechanical Data

- Case: SOT-223
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208

SOT223



Circuit Diagram



Marking:ZT2907A

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-60	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-60	V
Emitter-Base Breakdown Voltage	V_{EBO}	-5	V
Collector Current (Continuous)	I_C	-0.6	A

Thermal Characteristic

Parameter	Symbol	Value	Unit
Power Dissipation (Collector) *1	P_D	1.15	W
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	108	°C/W
Junction Temperature	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -10μA, I_E = 0	-60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = -10mA, I_B = 0	-60	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -10μA, I_C = 0	-5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -50V, I_E = 0	-	-	-10	nA
		V_{CB} = -50V, I_E = 0,T_A = 125°C	-	-	-10	μA
Collector Cut-off Current	I_{CEX}	V_{CE} = -30V, $V_{EB(OFF)}$ = -0.5V	-	-	-50	nA
Base Cut-off Current	I_{BL}	V_{CE} = -30V, $V_{EB(OFF)}$ = -0.5V	-	-	-50	nA
DC Current Gain	h_{FE}	V_{CE} = -10V, I_C = -0.1mA	75	-	-	-
		V_{CE} = -10V, I_C = -1mA	100	-	-	-
		V_{CE} = -10V, I_C = -10mA	100	-	-	-
		V_{CE} = -10V, I_C = -150mA	100	-	300	-
		V_{CE} = -10V, I_C = -500mA	50	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -150mA, I_B = -15mA	-	-	-0.4	V
		I_C = -500mA, I_B = -50 mA	-	-	-1.6	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	I_C = -150mA, I_B = -15mA	-	-	-1.3	V
		I_C = -500mA, I_B = -50 mA	-	-	-2.6	V
Output Capacitance	C_{OBO}	V_{CB} = -10V, I_E = 0, f = 100MHz	-	-	8	pF
Input Capacitance	C_{IBO}	I_C = 0, V_{EB} = -2V, f =100MHz	-	-	30	pF
Transition Frequency	f_T	I_C = -50mA, V_{CE} = -20V f = 100MHz	200	-	-	MHZ
Delay Time	t_d	V_{CC} = -30V I_C = -150mA, I_{B1} = -15mA	-	-	10	ns
Rise Time	t_r		-	-	40	ns
Storage Time	t_s	V_{CC} = -6V, I_C = -150mA I_{B1} = I_{B2} = -15mA	-	-	225	ns
Fall Time	t_f		-	-	60	ns

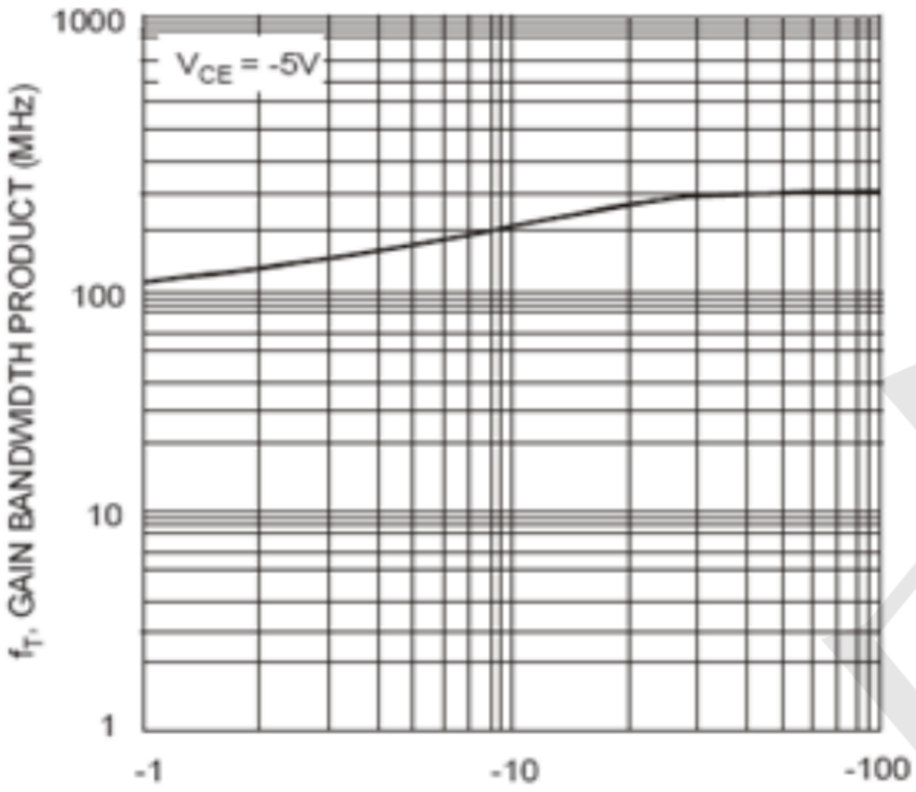


Fig. 1 Gain Bandwidth Product vs. Collector Current

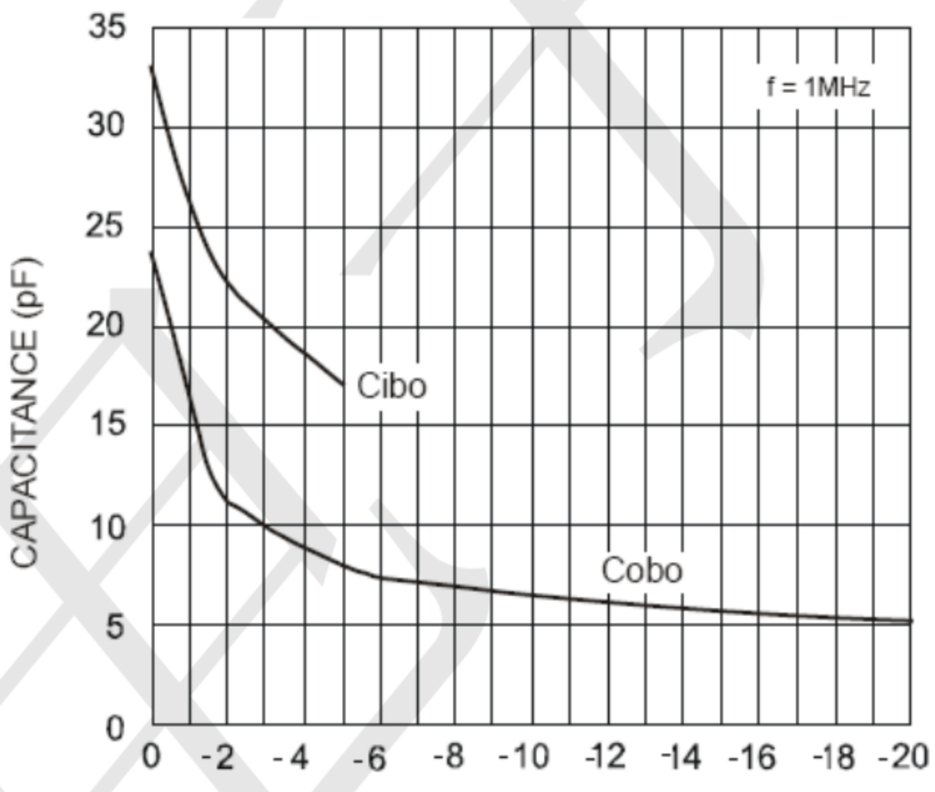


Fig. 2, Typical Capacitance Characteristics

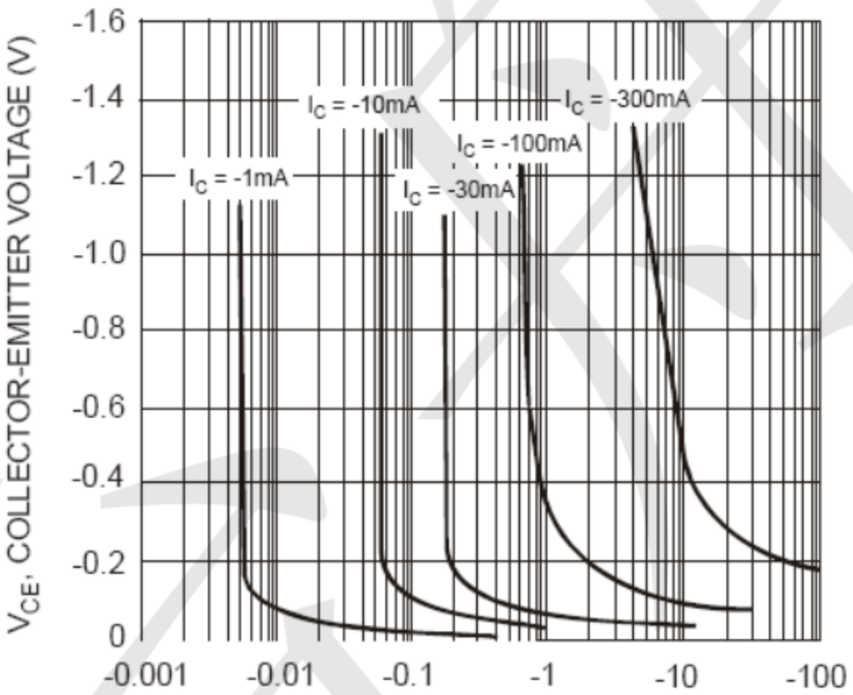


Fig. 3, Typical Collector Saturation Region

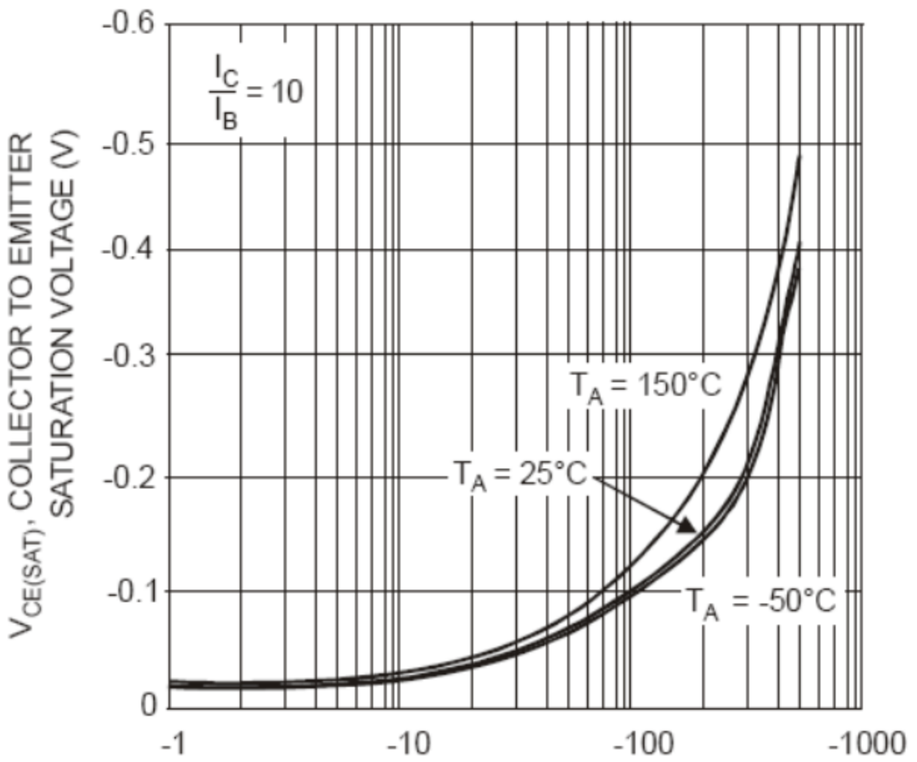


Fig. 4, Collector-Emitter Saturation Voltage vs. Collector Current

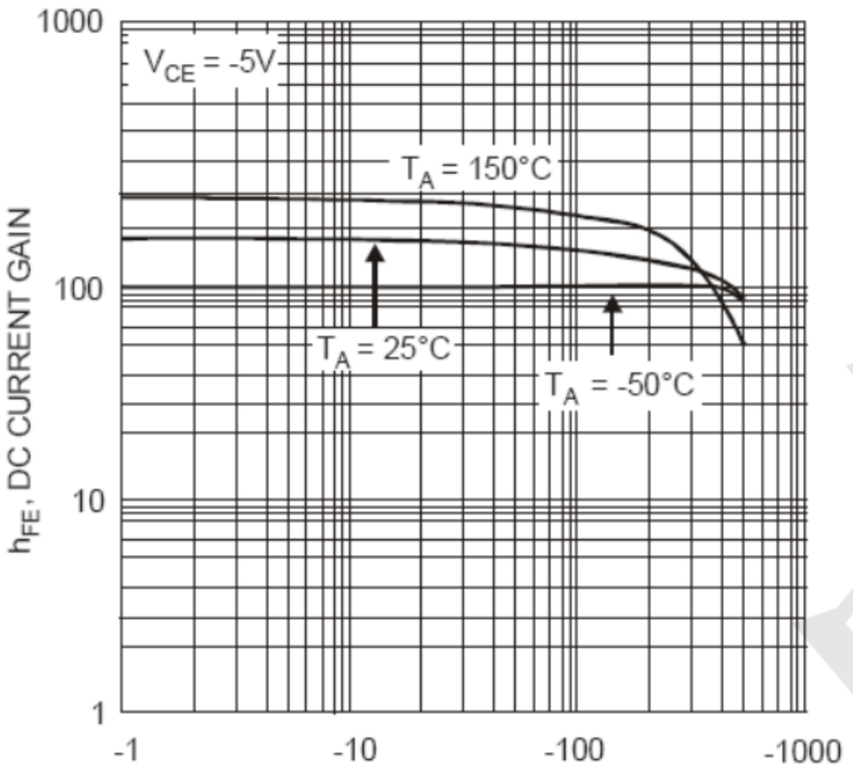


Fig. 5, DC Current Gain vs Collector Current

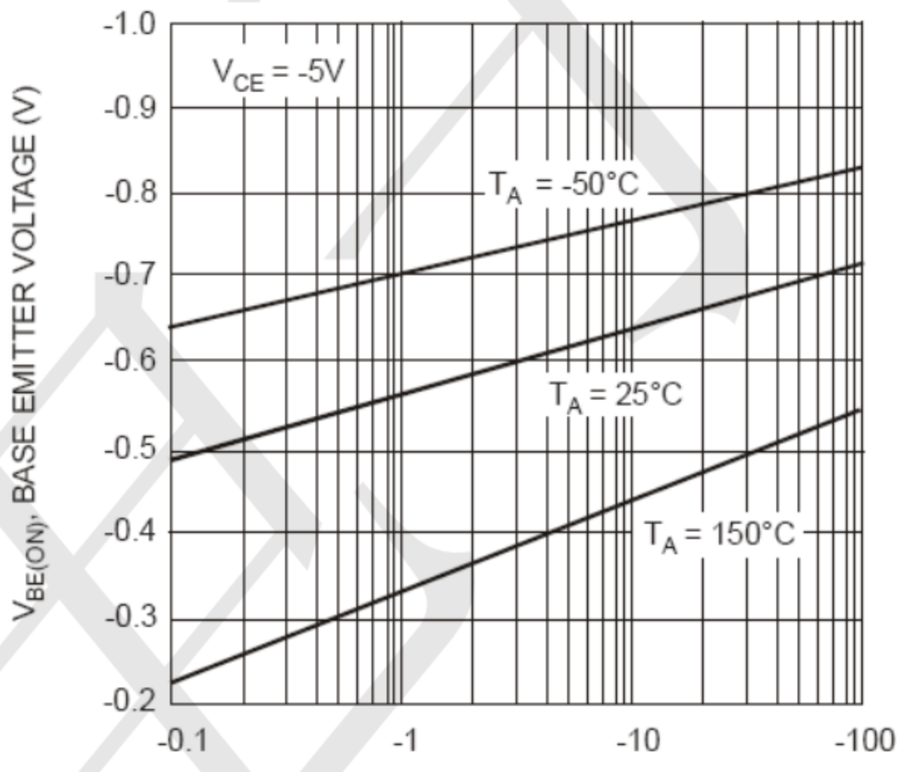
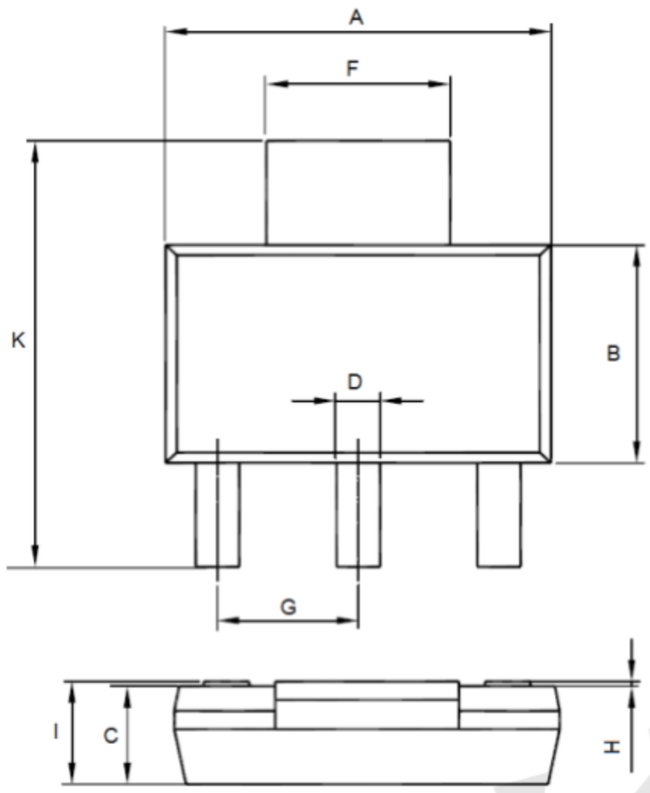


Fig. 6, Base-Emitter Voltage vs. Collector Current

Outline Drawing - SOT223



SOT-223		
Dim	Min	Max
A	6.10	6.50
B	3.30	3.70
C	1.50	1.70
D	0.66	0.82
E	0.90	1.15
F	2.90	3.10
G	2.20	2.40
H	0.02	0.10
I	1.52	1.80
J	0.20	0.40
K	6.70	7.30