

Features

- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

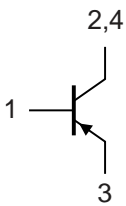
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 125°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V _{CBO}	-60	V
Collector-Emitter Voltage	V _{CEO}	-60	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-600	mA
Power Dissipation	P _D	1	W

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Marking: ZT2907A

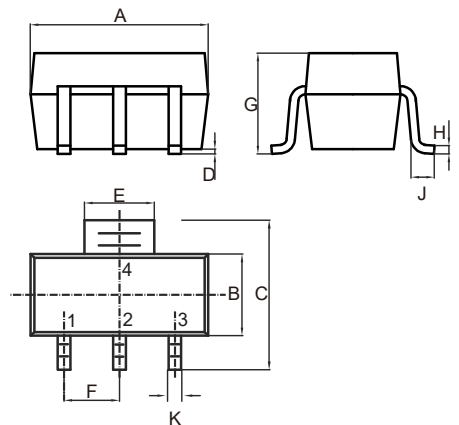
Internal Structure



1.BASE
2,4.COLLECTOR
3.EMITTER

**PNP
Plastic Encapsulate
Transistors**

SOT-223



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.248	0.264	6.30	6.70	
B	0.130	0.146	3.30	3.70	
C	0.264	0.287	6.70	7.30	
D	0.001	0.004	0.02	0.10	
E	0.114	0.122	2.90	3.10	
F	0.091		2.30		TYP.
G	---	0.071	---	1.80	
H	0.009	0.014	0.23	0.35	
J	0.030	---	0.75	---	
K	0.026	0.033	0.66	0.84	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60			V	$I_C = -1\text{mA}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60			V	$I_C = -10\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -1\text{mA}, I_C = 0$
Collector-Base Cutoff Current	I_{CBO}			-10	nA	$V_{CB} = -50\text{V}, I_E = 0$
Emitter-Base Cutoff Current	I_{EBO}			-10	nA	$V_{EB} = -5\text{V}, I_C = 0$
DC Current Gain ^(Note 2)	$h_{FE(1)}$	75				$V_{CE} = -10\text{V}, I_C = -0.1\text{mA}$
	$h_{FE(2)}$	100				$V_{CE} = -10\text{V}, I_C = -1\text{mA}$
	$h_{FE(3)}$	100				$V_{CE} = -10\text{V}, I_C = -10\text{mA}$
	$h_{FE(4)}$	100		300		$V_{CE} = -10\text{V}, I_C = -150\text{mA}$
	$h_{FE(5)}$	50				$V_{CE} = -10\text{V}, I_C = -500\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.4	V	$I_C = -150\text{mA}, I_B = -15\text{mA}$
				-1.6	V	$I_C = -500\text{mA}, I_B = -50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.3	V	$I_C = -150\text{mA}, I_B = -15\text{mA}$
				-2.6	V	$I_C = -500\text{mA}, I_B = -50\text{mA}$
Transition Frequency	f_T	200			MHz	$V_{CE} = -10\text{V}, I_C = -20\text{mA}, f = 100\text{MHz}$
Output Capacitance	C_{cbo}			8	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$,
Input Capacitance	C_{ibo}			30	pF	$V_{EB} = -2\text{V}, I_C = 0, f = 1\text{MHz}$,
Delay Time	t_d			12	ns	$V_{CC} = -30\text{V}, I_C = -150\text{mA}, I_{B1} = -I_{B2} = -15\text{mA}$
Rise Time	t_r			30	ns	
Turn On Time	t_{on}			40	ns	
Storage Time	t_s			300	ns	
Fall Time	t_f			65	ns	
Turn Off Time	t_{off}			365	ns	

 Note: 2. Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

Curve Characteristics

Fig. 1 - Static Characteristics

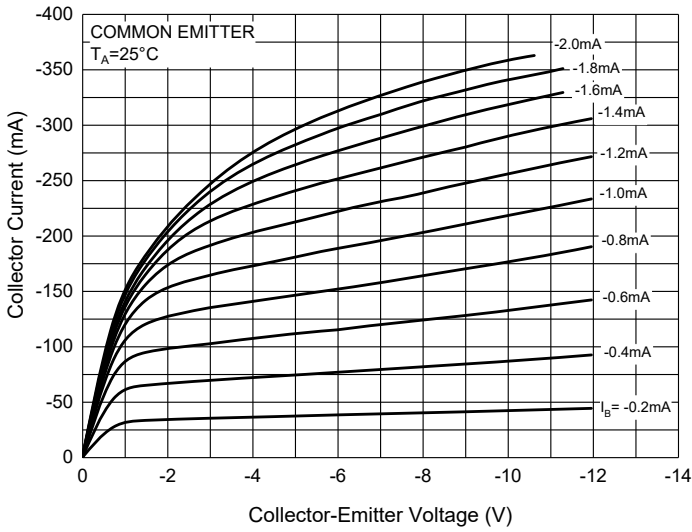


Fig. 2 - DC Current Gain Characteristics

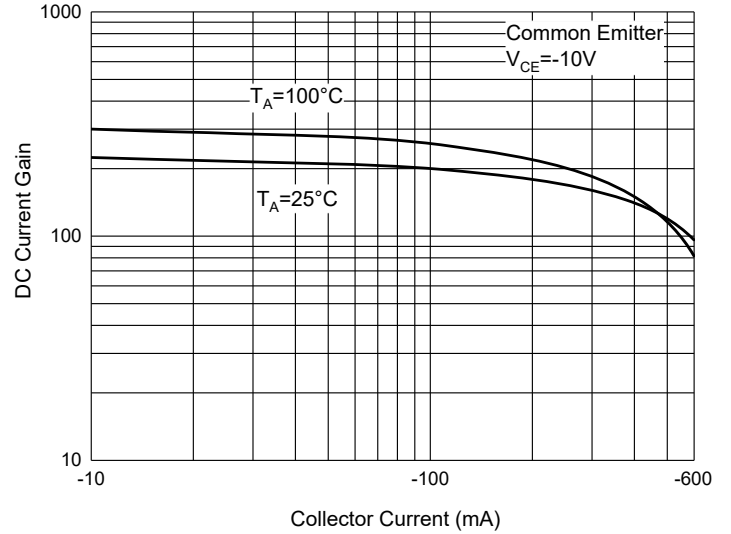


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

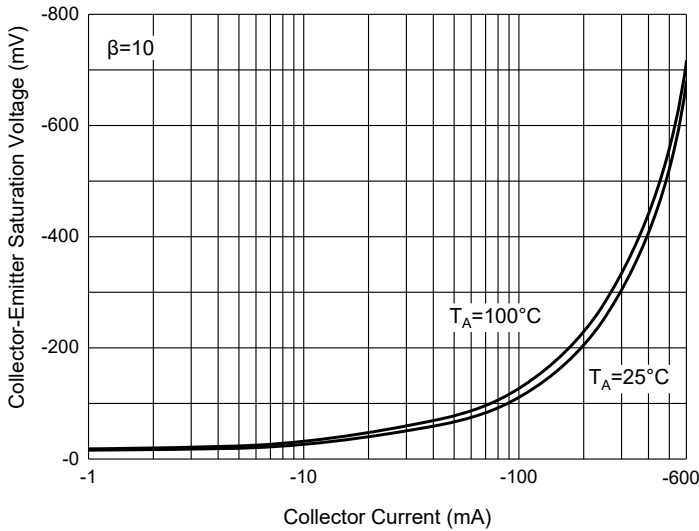


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

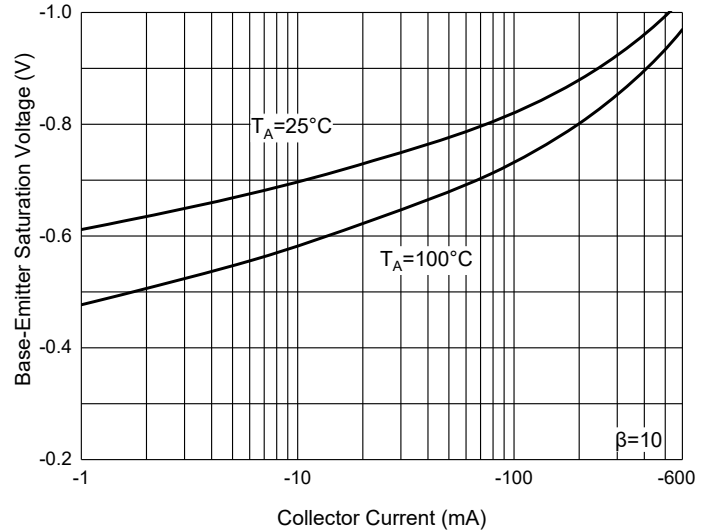


Fig. 5 - Base-Emitter Voltage Characteristics

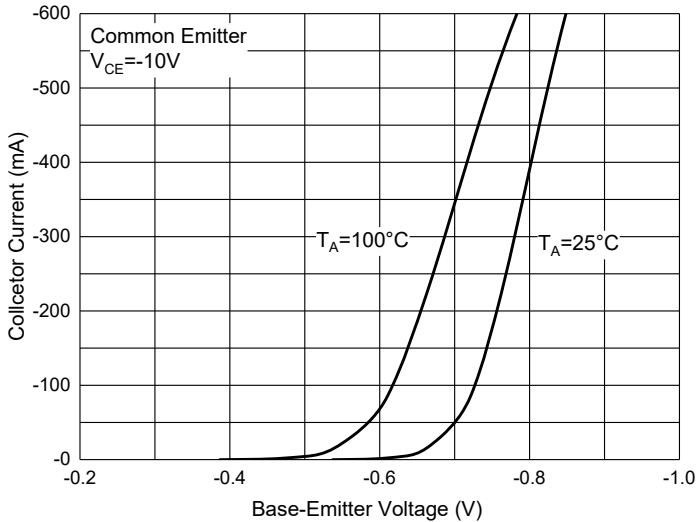
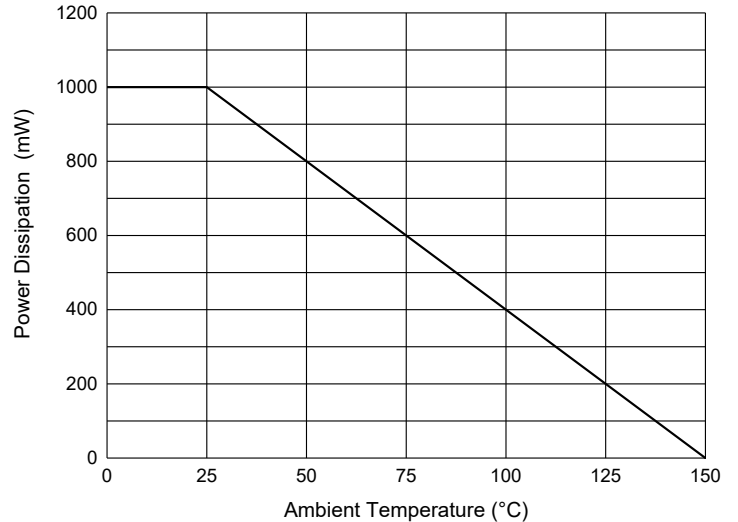


Fig. 6 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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