Features

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

NPN Plastic Encapsulate Transistors

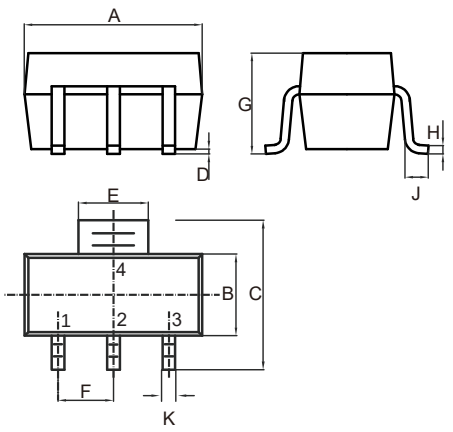
Maximum Ratings @ 25°C Unless Otherwise Specified

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	0.6	A
Collector Power Dissipation	P_C	1	W

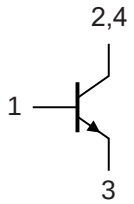
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SOT-223



DIMENSIONS					
DIM	INCHES		MM		NOTE
	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	

Internal Structure



1.BASE
2,4.COLLECTOR
3.EMITTER

Marking: ZT4401

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=100μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	40			V	I_C=1mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6			V	I_E=100μA, I_C=0
Collector-Base Cutoff Current	I_{CBO}			50	nA	V_{CB}=60V, I_E=0
Emitter-Base Cutoff Current	I_{EBO}			50	nA	V_{EB} =6V, I_C=0
DC Current Gain	$h_{FE(1)}$	20				V_{CE}=1V, I_C=0.1mA
	$h_{FE(2)}$	40				V_{CE}=1V, I_C=1mA
	$h_{FE(3)}$	80				V_{CE}=1V, I_C=10mA
	$h_{FE(4)}$	100		300		V_{CE}=1V, I_C=150mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.4	V	I_C=150mA, I_B=15mA
				0.75	V	I_C=500mA, I_B=50mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			0.95	V	I_C=150mA, I_B=15mA
				1.2	V	I_C=500mA, I_B=50mA
Transition Frequency	f_T	250			MHz	V_{CE}=10V, I_C=20mA, f=100MHz
Collector Output Capacitance	C_{ob}			8	pF	V_{CB}=5V, I_E=0, f=1MHz
Emitter iutput Capacitance	C_{ib}			30	pF	V_{EB}=0.5V, I_C=0, f=1MHz

Curve Characteristics

Fig. 1 - Static Characteristics

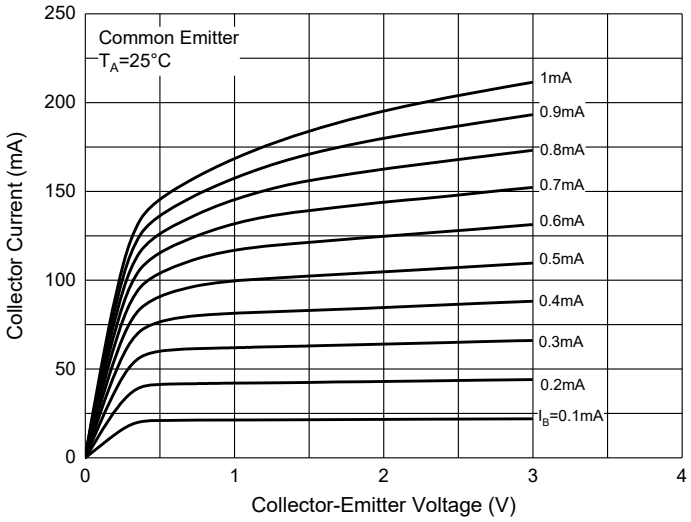


Fig. 2 - DC Current Gain Characteristics

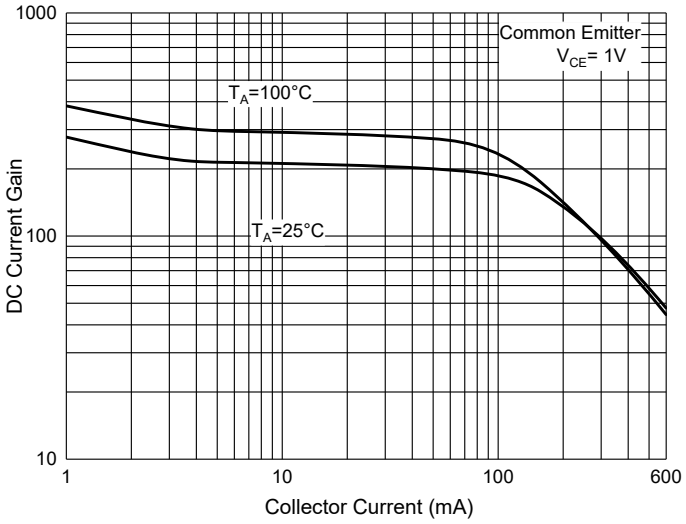


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

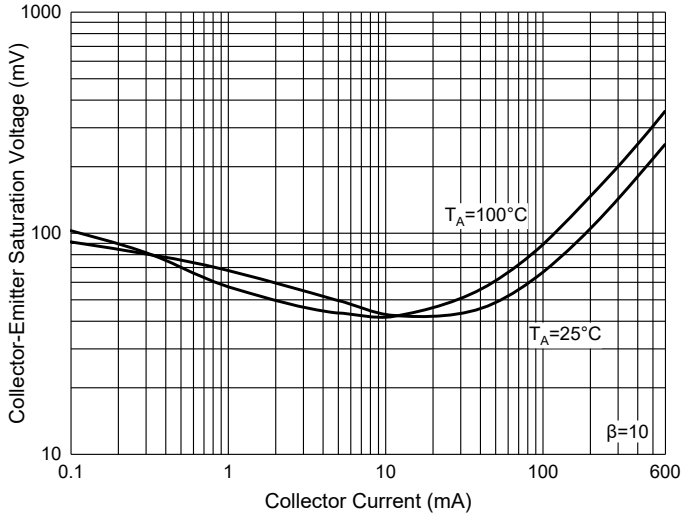


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

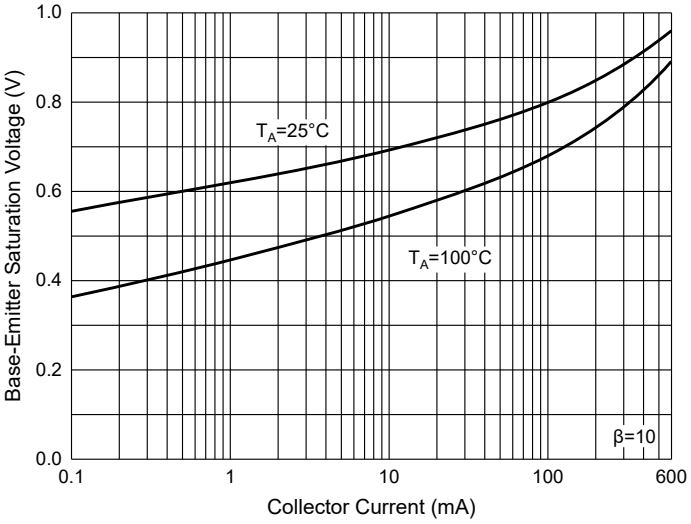


Fig. 5 - Base-Emitter Voltage Characteristics

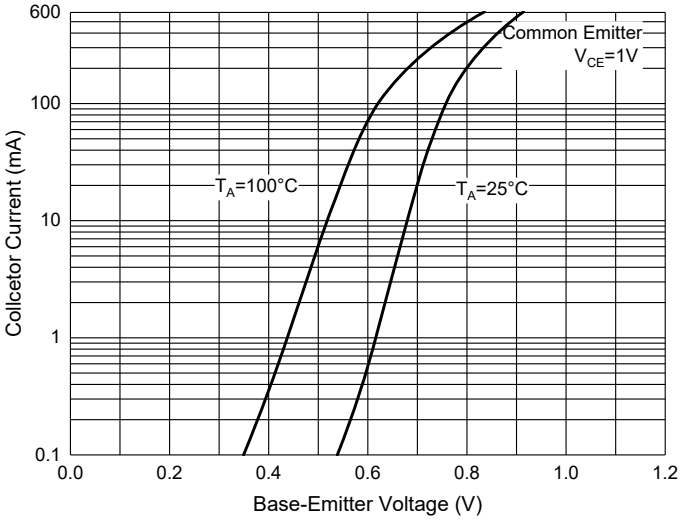
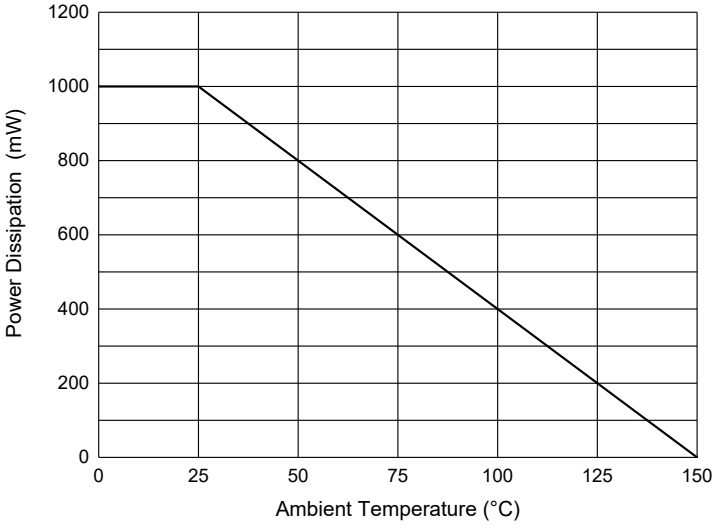


Fig. 6 - Power Derating Curve



Ordering Information

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