

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)

Maximum Ratings @ 25°C Unless Otherwise Specified

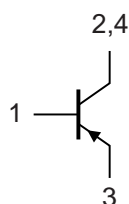
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-4.5	A
Power Dissipation	P_D	0.5	W

Thermal characteristics

Parameter	Symbol	Rating	Unit
Junction Temperature Range	T_J	-55~+150	°C
Storage Temperature Range	T_{STG}	-55~+150	°C
Thermal Resistance from Junction to Ambient	$R_{th(J-A)}$	250	°C/W
Thermal Resistance from Junction to Case	$R_{th(J-C)}$	50	°C/W

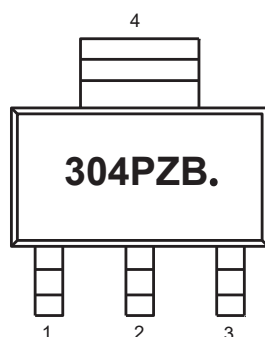
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



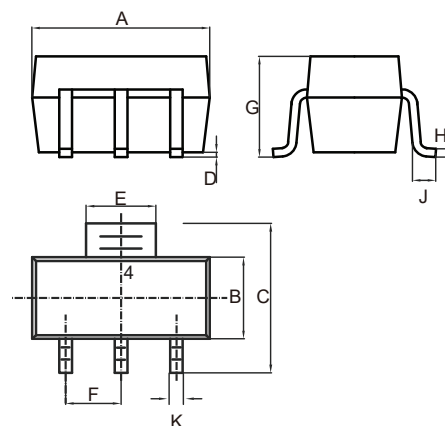
1.Base
2,4.Collector
3.Emitter

Marking Code



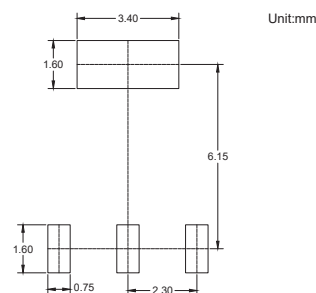
PNP Transistor

SOT-223



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	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60			V	$I_C = -1mA, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60			V	$I_C = -1mA, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu A, I_C = 0$
Collector-Base Cutoff Current	I_{CBO}			-100	nA	$V_{CB} = -60V, I_E = 0$
Emitter-Base Cutoff Current	I_{EBO}			-100	nA	$V_{EB} = -5V, I_C = 0$
DC Current Gain	$h_{FE(1)}$	200				$V_{CE} = -2V, I_C = -0.5A$
	$h_{FE(2)}$	200				$V_{CE} = -2V, I_C = -1A$
	$h_{FE(3)}$	150				$V_{CE} = -2V, I_C = -2A$
	$h_{FE(4)}$	120				$V_{CE} = -2V, I_C = -4A$
	$h_{FE(5)}$	60				$V_{CE} = -2V, I_C = -6A$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-50	mV	$I_C = -0.5A, I_B = -50mA$
				-90	mV	$I_C = -1A, I_B = -50mA$
				-190	mV	$I_C = -1A, I_B = -10mA$
				-230	mV	$I_C = -2A, I_B = -40mA$
				-300	mV	$I_C = -4A, I_B = -200mA$
				-230	mV	$I_C = -4A, I_B = -400mA$
				-375	mV	$I_C = -4.5A, I_B = -225mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-0.9	V	$I_C = -1A, I_B = -100mA$
				-1.1	V	$I_C = -4A, I_B = -400mA$
Base-Emitter Voltage	V_{BE}			-0.9	V	$V_{CE} = -2V, I_C = -2A$
Transition Frequency	f_T		130		MHz	$V_{CE} = -10V, I_C = -100mA, f = 100MHz$
Output Capacitance	C_{ob}		50		pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$

Curve Characteristics

Fig. 1 - Static Characteristics

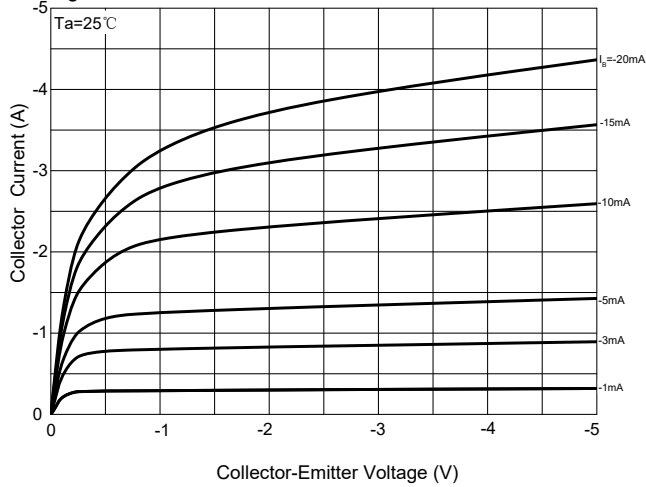


Fig. 2 - DC Current Gain Characteristics

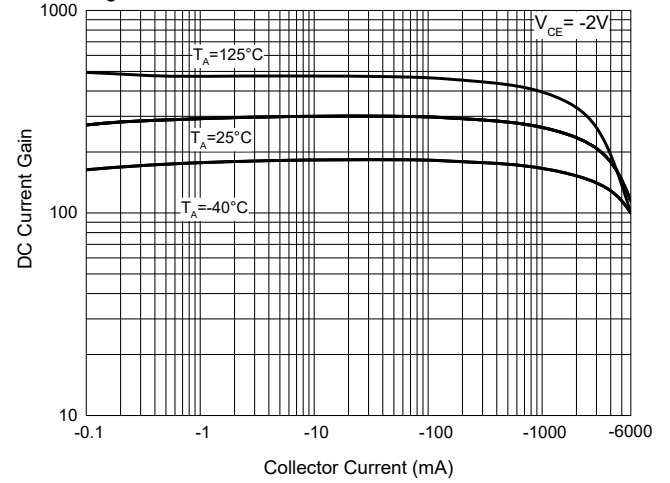


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

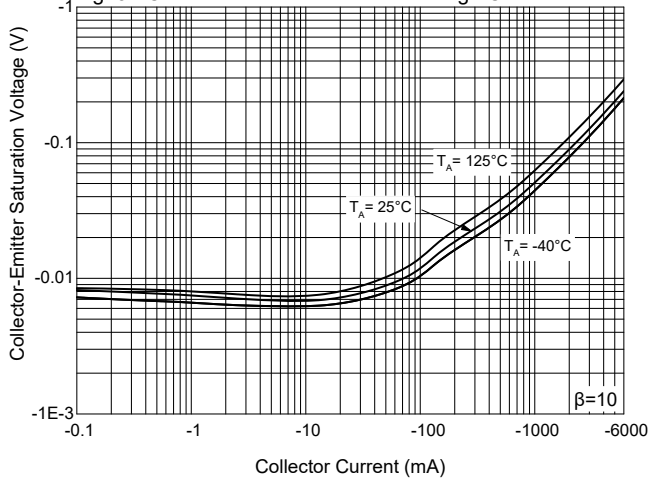


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

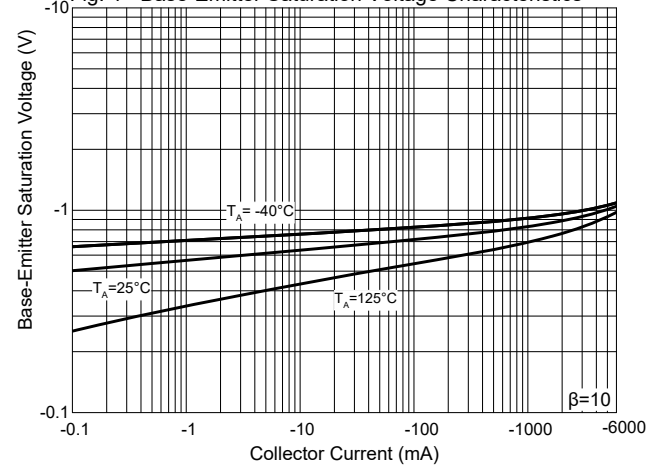


Fig. 5 - Base-Emitter Voltage Characteristics

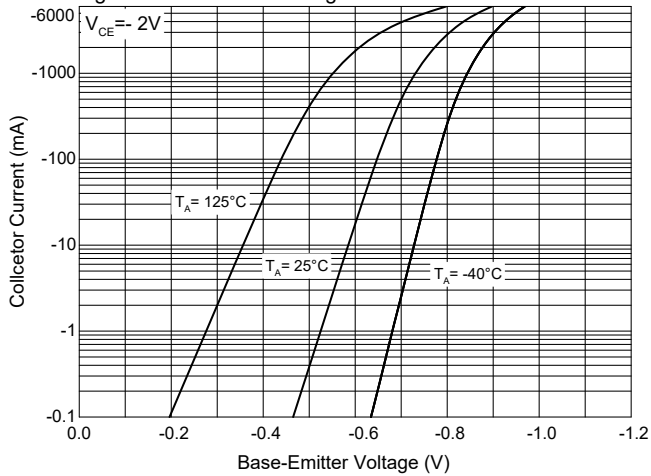
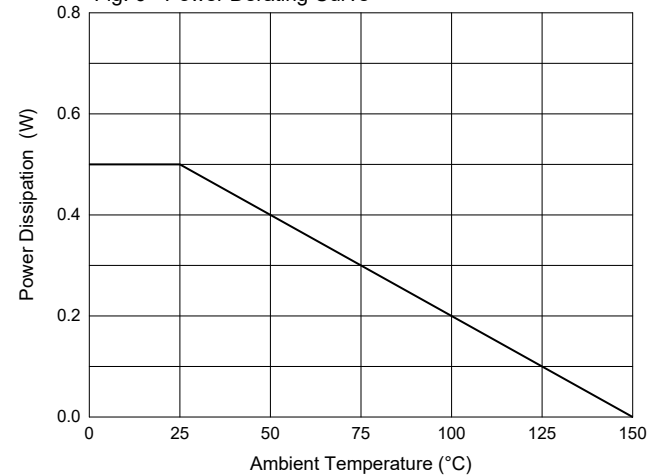


Fig. 6 - Power Derating Curve



Ordering Information

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

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