Features

- Low Collector-Emitter Saturation Voltage
- High Current Capability
- Halogen Free. “Green” Device (Note 1)
- AEC-Q101 Qualified
- 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)

PNP
Low $V_{CE(sat)}$
Transistor

Maximum Ratings @ 25°C Unless Otherwise Specified

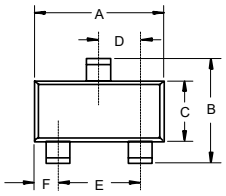
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-2	A
Power Dissipation	P_D	300	mW

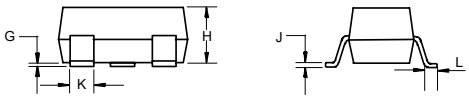
Thermal characteristics

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	$Rth_{(J-A)}$	417	°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.

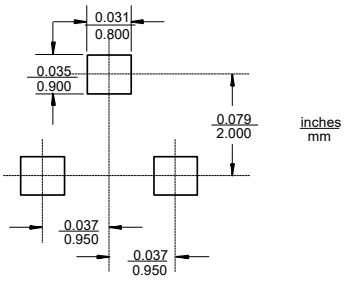
SOT-23



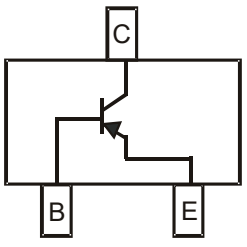


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.014	0.020	0.35	0.51	
L	0.007	0.020	0.20	0.50	

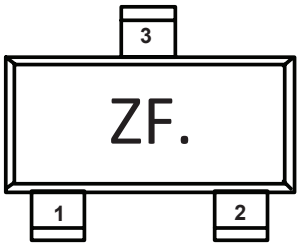
Suggested Solder Pad Layout



Internal Structure



Device Marking



Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40			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	$V_{(BR)EBO}$	-5			V	I_E=-100μA, I_C=0
Collector Cutoff Current	I_{CBO}			-100	nA	V_{CB}=-30V, I_E=0
Emitter Cutoff Current	I_{EBO}			-100	nA	V_{EB}=-4V, I_C=0
DC Current Gain	h_{FE}	300				V_{CE}=-2V, I_C=-100mA
		260				V_{CE}=-2V, I_C=-500mA
		210				V_{CE}=-2V, I_C=-1A
		100				V_{CE}=-2V, I_C=-2A
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-100	mV	I_C=-100mA, I_B=-1mA
				-110	mV	I_C=-500mA, I_B=-50mA
				-225	mV	I_C=-750mA, I_B=-15mA
				-225	mV	I_C=-1A, I_B=-50mA
				-350	mV	I_C=-2A, I_B=-200mA
Equivalent On-Resistance	$R_{CE(sat)}$			220	mΩ	I_C=-500mA, I_B=-50mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.1	V	I_C=-2A, I_B=-200mA
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			-0.75	V	V_{CE}=-2V, I_C=-100mA
Transition Frequency	f_T	100			MHz	V_{CE}=-10V, I_C=-100mA, f=100MHz
Collector-Base Capacitance	C_{cb}			28	pF	V_{CB}=-10V, I_E=0,f=1MHz

Curve Characteristics

Fig. 1 - Static Characteristics

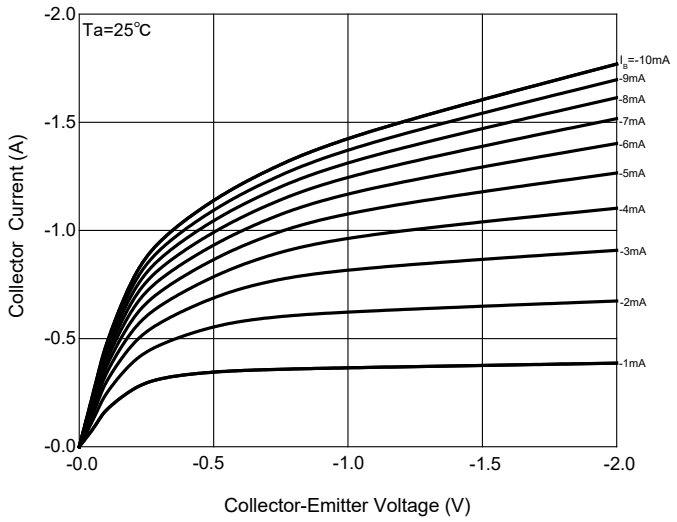


Fig. 2 - DC Current Gain Characteristics

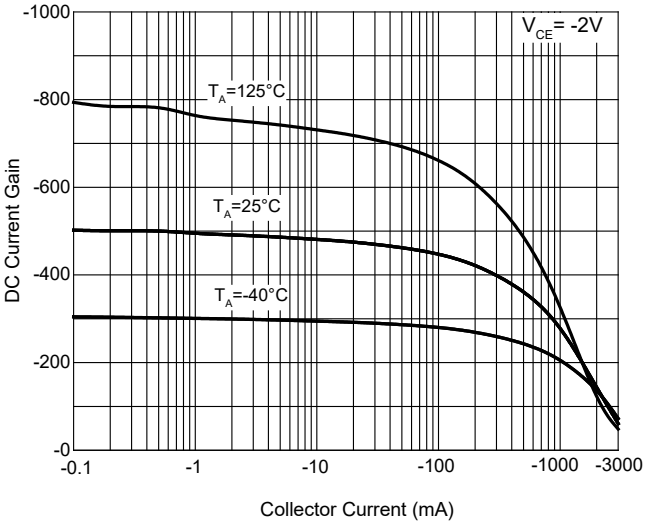


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

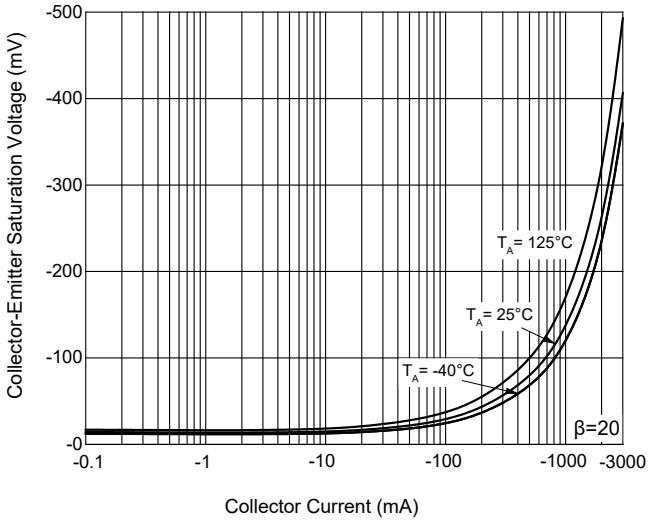


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

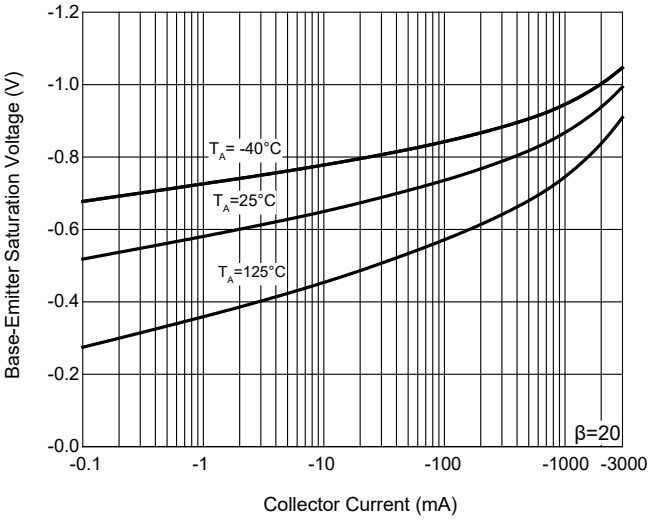


Fig. 5 - Base-Emitter Voltage Characteristics

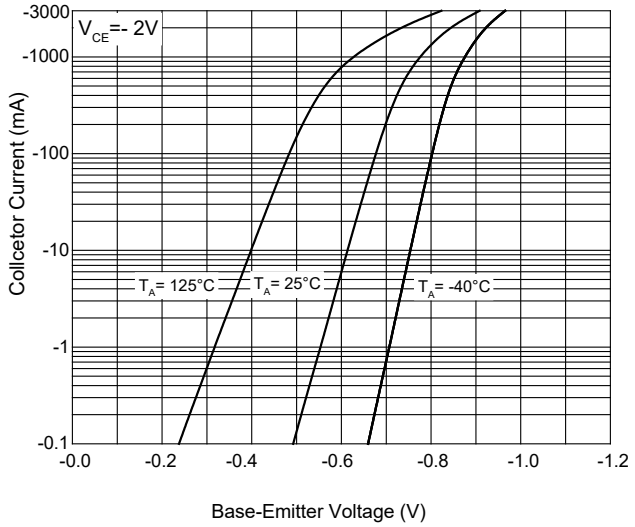
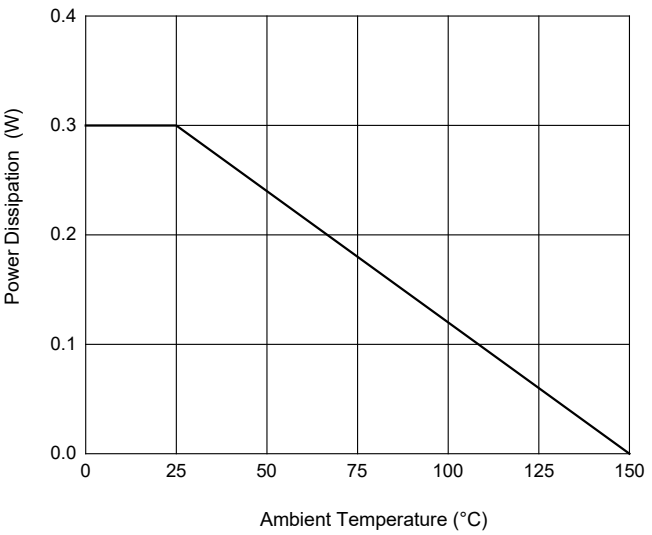


Fig. 6 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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