

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)

**PNP
General Purpose
Transistor**

Maximum Ratings @ 25°C Unless Otherwise Specified

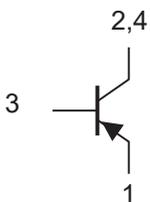
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-180	V
Collector-Emitter Voltage	V_{CEO}	-140	V
Emitter-Base Voltage	V_{EBO}	-7	V
Collector Current	I_C	-4	A
Power Dissipation	P_D	0.5	W

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 ^(Note2)	$R_{th(J-A)}$	250	°C/W

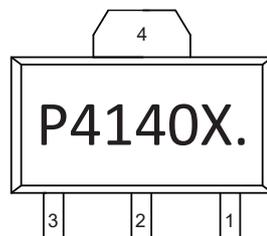
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2.Part mounted on FR-4 board with recommended pad layout.

Internal Structure

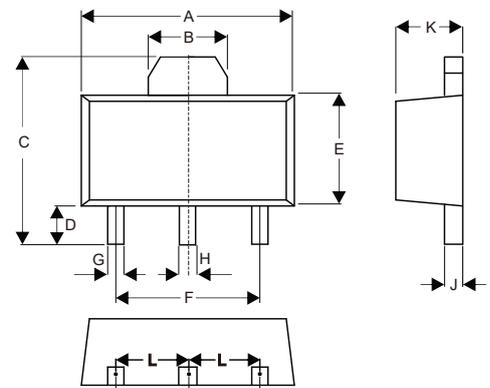


3.BASE
2,4.COLLECTOR
1.EMITTER

Marking Code

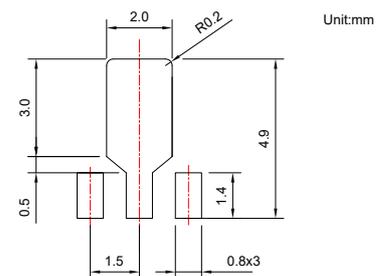


SOT-89



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.061		1.55		TYP.
C	0.154	0.171	3.91	4.35	
D	0.031	0.047	0.80	1.20	
E	0.089	0.104	2.25	2.65	
F	0.118		3.00		TYP.
G	0.013	0.020	0.33	0.52	
H	0.015	0.021	0.38	0.53	
J	0.014	0.017	0.35	0.44	
K	0.055	0.063	1.40	1.60	
L	0.059		1.50		TYP.

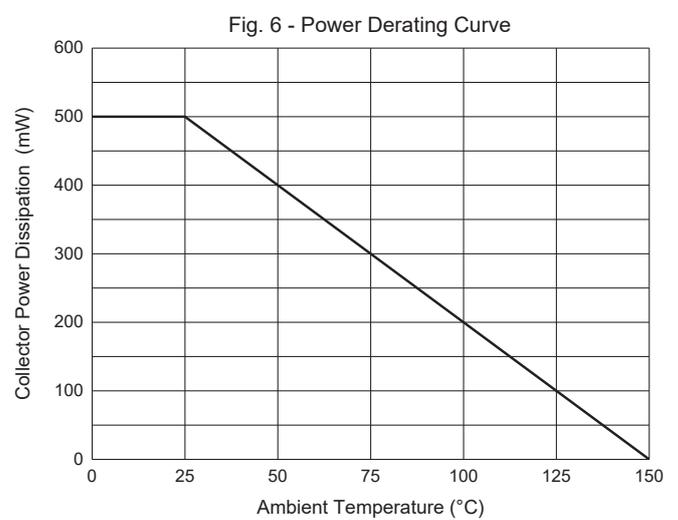
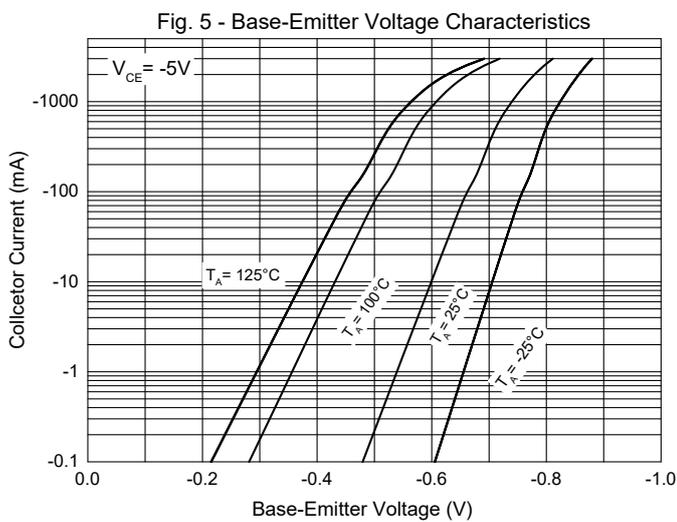
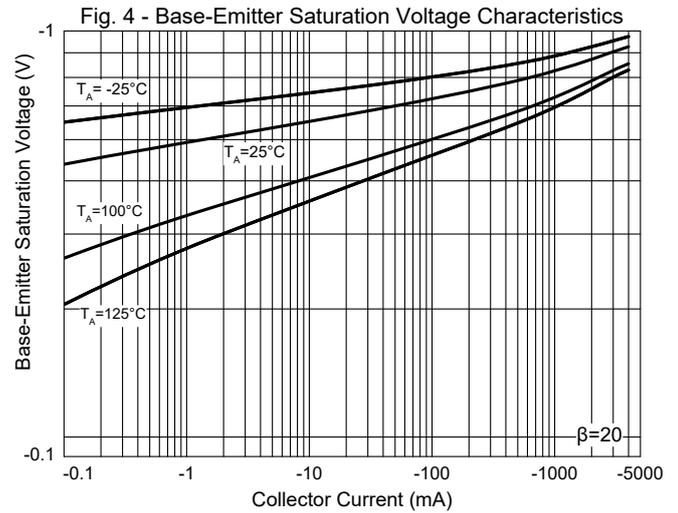
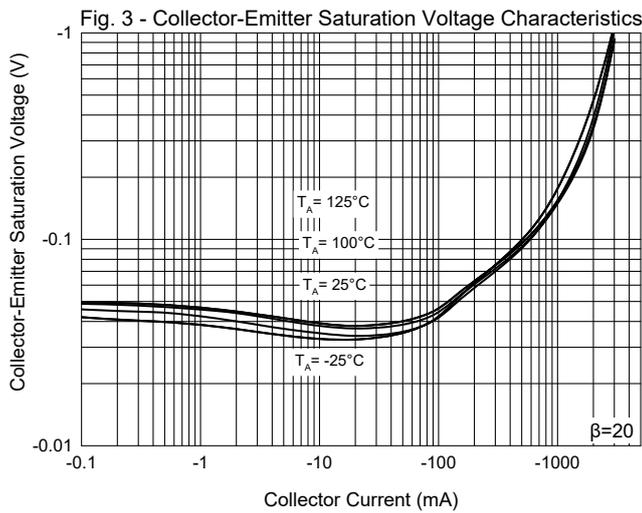
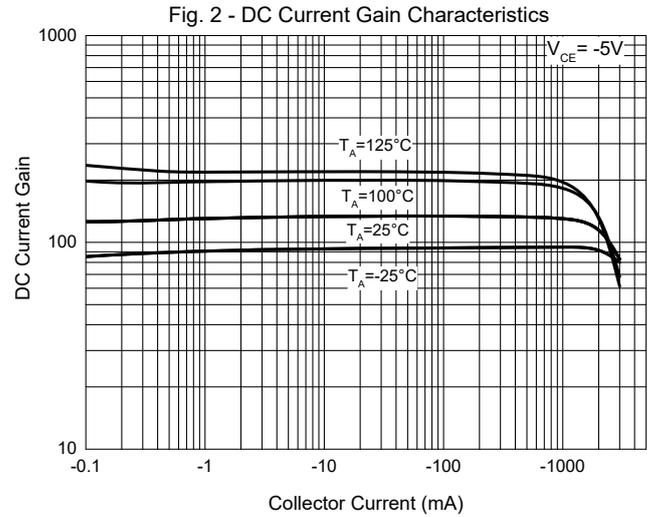
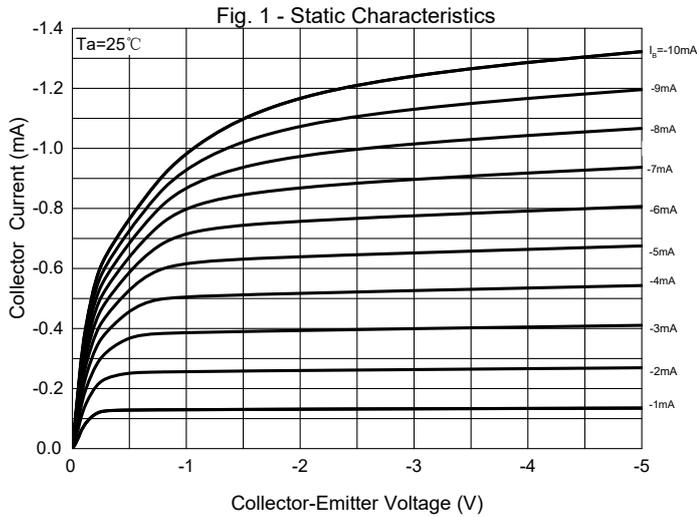
Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-180			V	$I_C=-100\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-140			V	$I_C=-10mA, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-7			V	$I_E=-100\mu A, I_C=0$
Collector-Base Cutoff Current	I_{CBO}			-0.1	μA	$V_{CB}=-150V, I_E=0$
Emitter-Base Cutoff Current	I_{EBO}			-0.1	μA	$V_{EB}=-6V, I_C=0$
DC Current Gain	$h_{FE(1)}$	100				$V_{CE}=-5V, I_C=-10mA$
	$h_{FE(2)}$	100		300		$V_{CE}=-5V, I_C=-1A$
	$h_{FE(3)}$	45				$V_{CE}=-5V, I_C=-3A$
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$			-60	mV	$I_C=-0.1A, I_B=-5mA$
	$V_{CE(sat)2}$			-120	mV	$I_C=-0.5A, I_B=-50mA$
	$V_{CE(sat)3}$			-150	mV	$I_C=-1A, I_B=-100mA$
	$V_{CE(sat)4}$			-360	mV	$I_C=-3A, I_B=-300mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.04	V	$I_C=-3A, I_B=-300mA$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$			-0.93	V	$V_{CE}=-5V, I_C=-3A$
Collector Capacitance	C_{ob}		45		pF	$V_{CB}=-10V, I_E=0, f=1MHz$

Curve Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 1Kpcs/Reel

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