

#### **Features**

- Built-In Bias Resistors Enable the Configuration of an Inverter Circuit Without Connecting External Input Resistors
- The Bias Resistors Consist of Thin-Film Resistors With Complete Isolation to Allow Negative Biasing of the Input. They Also Have the Advantage of Almost Completely Eliminating Parasitic Effects
- Only the On/Off Conditions Need to Be Set For Operation, Making Device Design Easy
- 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)

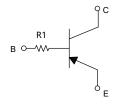
#### Maximum Ratings @ 25°C Unless Otherwise Noted

Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	-50	<b>V</b>
Collector-Base Voltage	$V_{CBO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current-Continuous	I <sub>C</sub>	-100	mA
Collector Dissipation	Pc	200	mW
Junction Temperature Range	TJ	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

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

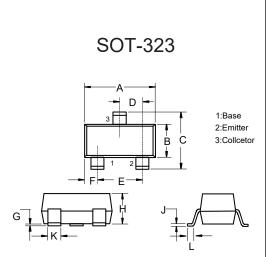
#### **Device Marking: 94**

#### Internal Structure



B:Base C:Collcetor E:Emitter

## PNP Digital Transistor



DIMENSIONS						
DIM INCHE		HES	HES MM		NOTE	
DIIVI	MIN	MAX	MIN	MAX	INOIL	
Α	0.071	0.087	1.80	2.20		
В	0.045	0.053	1.15	1.35		
С	0.083	0.096	2.10	2.45		
D	0.026		0.	65	TYP.	
Е	0.047	0.055	1.20	1.40		
F	0.012	0.016	0.30	0.40		
G	0.000	0.004	0.00	0.10		
Н	0.035	0.044	0.90	1.10		
J	0.002	0.010	0.05	0.25		
K	0.006	0.016	0.15	0.40		
L	0.010	0.018	0.26	0.46		

# Suggested Solder Pad Layout 0.70 (mm) 0.90 1.90 1.90

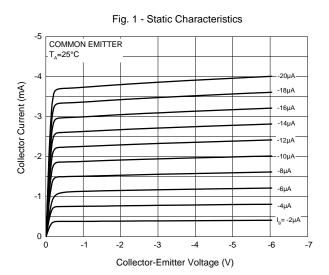


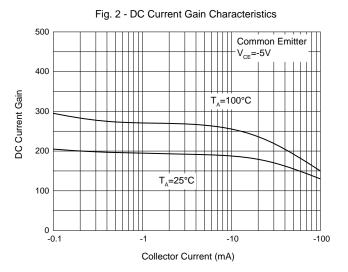
### Electrical Characteristics @ 25°C Unless Otherwise Specified

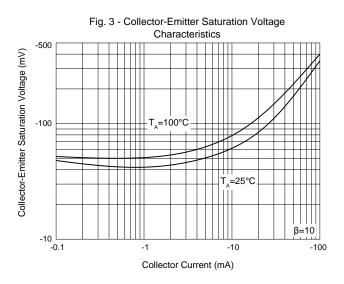
Parameter	Symbol	Min	Тур	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-50		-	<b>V</b>	$I_{C}$ =-50 $\mu$ A, $I_{E}$ =0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50			V	$I_C=-1$ mA, $I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	I <sub>E</sub> =-50μA, I <sub>C</sub> =0
Collector Cut-off Current	I <sub>CBO</sub>			-0.5	μΑ	$V_{CB}$ =-50 $V$ , $I_E$ =0
Emitter Cut-off Current	I <sub>EBO</sub>			-0.5	μΑ	$V_{EB}$ =-4 $V$ , $I_{C}$ =0
DC Current Gain	h <sub>FE</sub>	100	250	600		$I_C$ =-1mA, $V_{CE}$ =-5V
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>			-0.3	V	I <sub>C</sub> =-10mA, I <sub>B</sub> =-1mA
Input Resistance	R <sub>1</sub>	7	10	13	ΚΩ	
Transition Frequency	f <sub>T</sub>		250		MHz	V <sub>CE</sub> =-10.0V, I <sub>E</sub> =5mA, f=100MHz

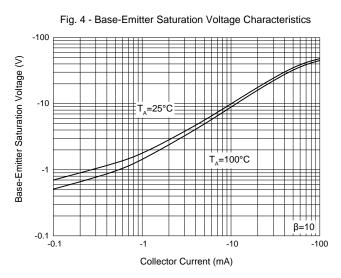


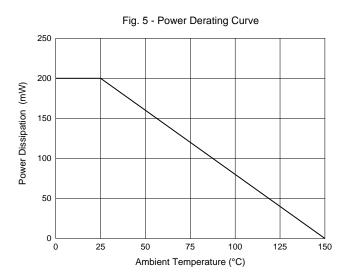
#### **Curve Characteristics**













#### **Ordering Information**

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

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