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 Available Upon Request By Adding Suffix "-HF"
- 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)

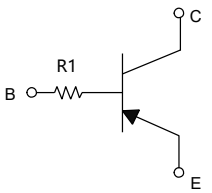
PNP
Digital Transistor

Maximum Ratings @ 25°C Unless Otherwise Specified

Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	-50	V
Collector-Base Voltage	V_{CBO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	mA
Collector Current-Continuous	I_C	-100	mA
Collector Dissipation	P_C	200	mW
Junction Temperature	T_J	-55 ~150	°C
Storage Temperature Range	T_{STG}	-55 ~150	°C

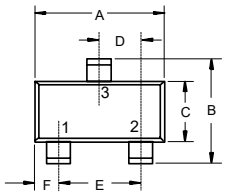
Device Marking：94

Internal Structure

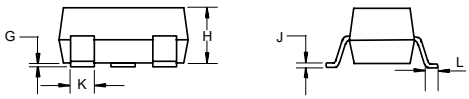


B:Base
C:Collcetor
E:Emitter

SOT-23

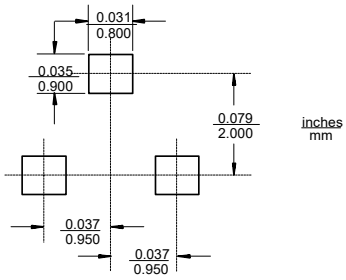


1:Base
2:Emitter
3:Collcetor



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	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



Electrical Characteristics @ 25° C UnlessOtherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-50	---	---	V	I_C=-50μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	---	---	V	I_C=-1mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	---	---	V	I_E=-50μA, I_C=0
Collector Cut-off Current	I_{CBO}	---	---	-0.5	μA	V_{CB}=-50V,I_E=0
Emitter Cut-off Current	I_{EBO}	---	---	-0.5	μA	V_{EB}=-4V,I_C=0
DC Current Gain	h_{FE}	100	250	600	---	I_C=-1mA, V_{CE}=-5V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	---	---	-0.3	V	I_C=-10mA, I_B=-1mA
Input Resistance	R_1	7	10	13	KΩ	
Transition Frequency	f_T	---	250	---	MHz	V_{CE}=-10.0V, I_E=5mA, f=100MHz

Curve Characteristics

Fig. 1 - Static Characteristics

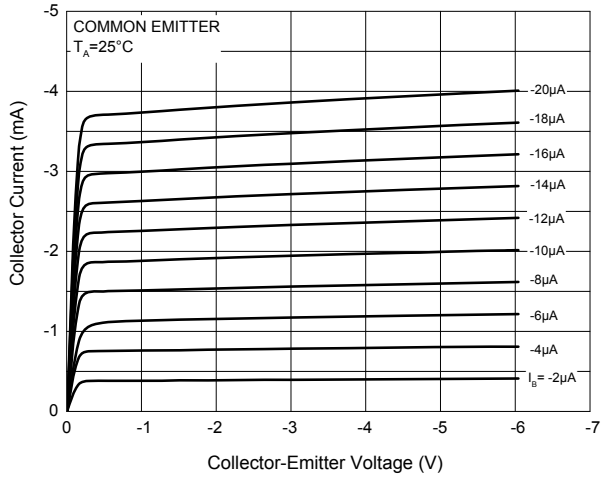


Fig. 2 - DC Current Gain Characteristics

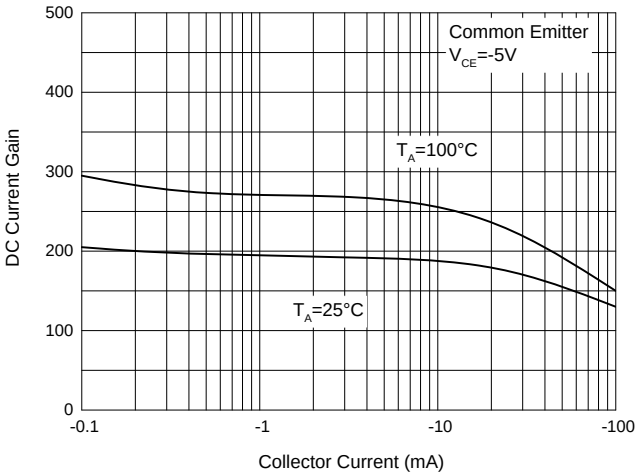


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

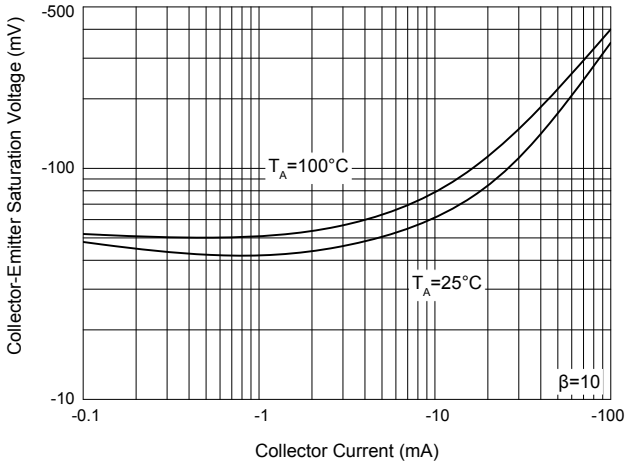


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

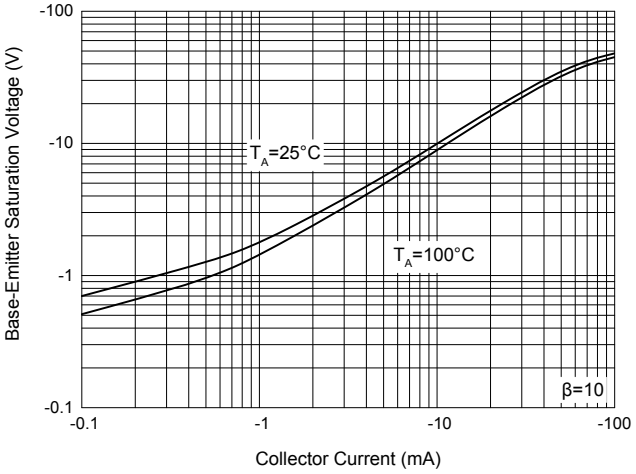
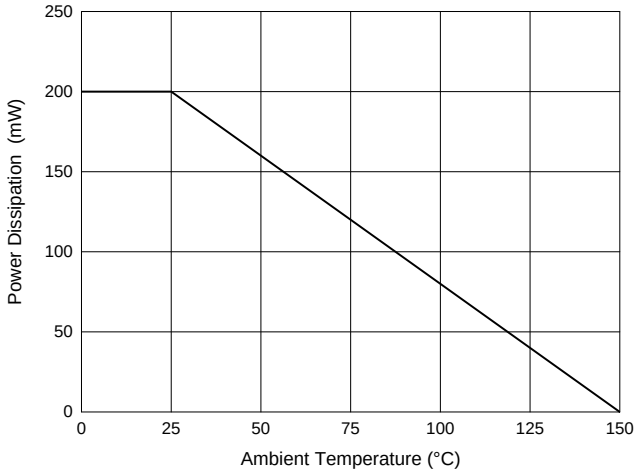


Fig. 5 - Power Derating Curve



Ordering Information

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF