



Micro Commercial Components



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Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit)
- 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"

Absolute Maximum Ratings

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

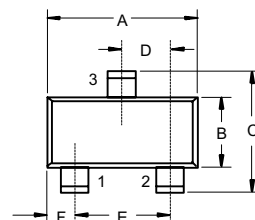
Electrical Characteristics

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

*Marking: 94

PNP Digital Transistor

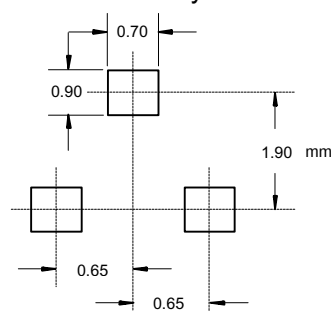
SOT-323



1: Base
2: Emitter
3: Collector

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

Suggested Solder Pad Layout



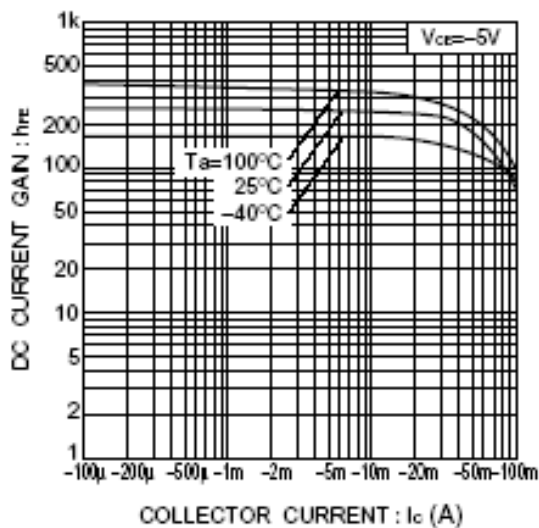


Fig.1 DC current gain vs. collector current

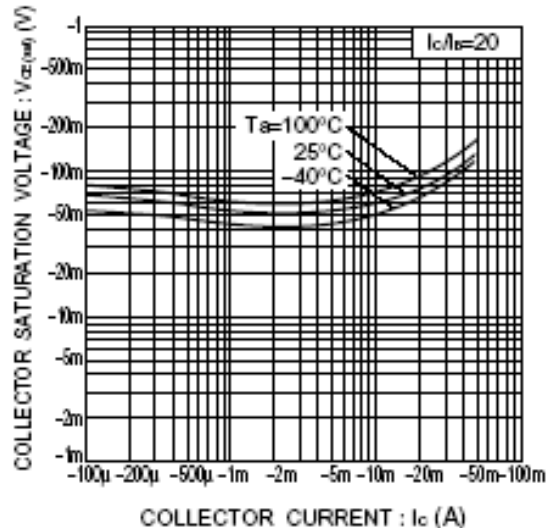
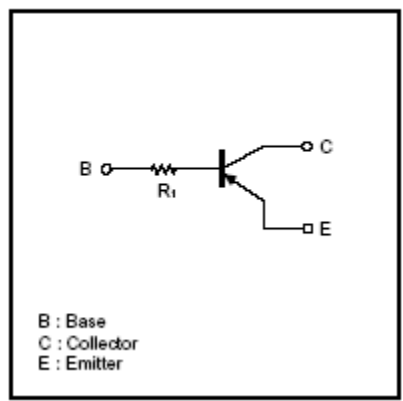


Fig.2 Collector-emitter saturation voltage vs. collector current

●Equivalent circuit



Ordering Information :

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

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

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