PNP
Digital Transistor

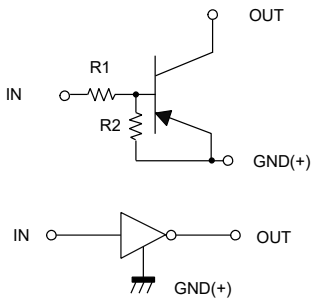
Features

- 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)

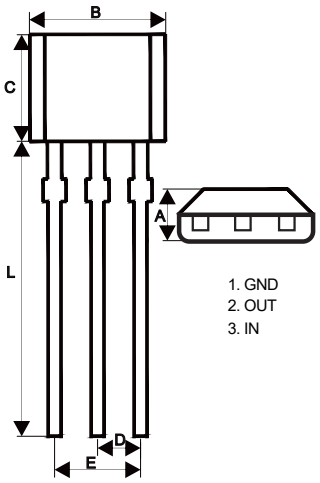
Maximum Ratings @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V_{CC}	---	-50	---	V
Input Voltage	V_{IN}	-40	---	10	V
Output Current	I_O	---	-30	---	mA
	$I_{C(Max)}$	---	-100	---	mA
Power Dissipation	P_D	---	300	---	mW
Junction Temperature	T_J	---	150	---	°C
Storage Temperature	T_{stg}	-55	---	150	°C

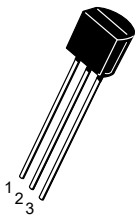
Internal Structure



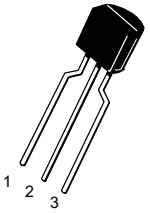
TO-92S



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.056	0.064	1.42	1.62	
B	0.154	0.161	3.90	4.10	
C	0.120	0.128	3.05	3.25	
D	0.050		1.27		Straight Lead
	0.086	0.110	2.20	2.80	Bent Lead
E	0.096	0.104	2.44	2.64	Straight Lead
	0.173	0.220	4.40	5.60	Bent Lead
L	0.594	0.610	15.10	15.50	



STRAIGHT LEAD
BULK PACK



BENT LEAD
AMMO PACK

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Input Voltage	$V_{I(off)}$	-0.5	---	---	V	V_{CC}=-5V, I_O=-100μA
	$V_{I(on)}$	---	---	-3.0	V	V_O=-0.3V, I_O=-2mA
Output Voltage	$V_{O(on)}$	---	---	-0.3	V	I_O=-10mA,I_I=-0.5mA
Input Current	I_I	---	---	-0.18	mA	V_I=-5V
Output Current	$I_{O(off)}$	---	---	-0.5	μA	V_{CC}=-50V, V_I=0
DC Current Gain	G_I	68	---	---		V_O=-5V, I_O=-5mA
Input Resistance	R_1	32.9	47	61.1	KΩ	
Resistance Ratio	R_2/R_1	0.8	1.0	1.2		
Transition Frequency	f_T	---	250	---	MHz	V_{CE}=-10V, I_E=5mA, f=100MHz

Curve Characteristics

Fig. 1 - DC Current Gain Characteristics

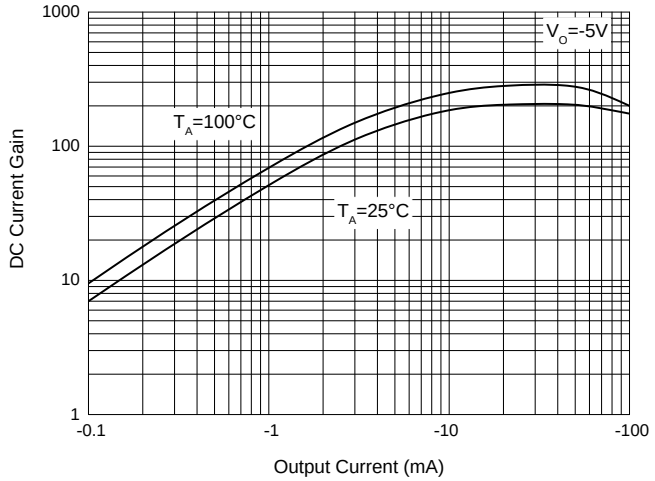


Fig. 2 - Input Voltage (on) Characteristics

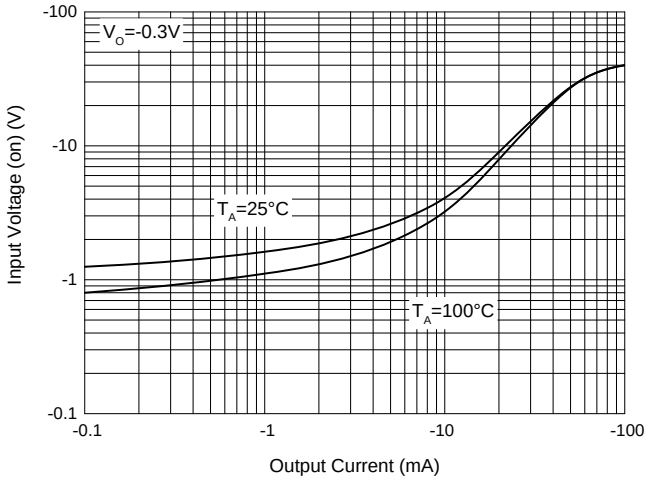


Fig. 3 - Input Voltage (off) Characteristics

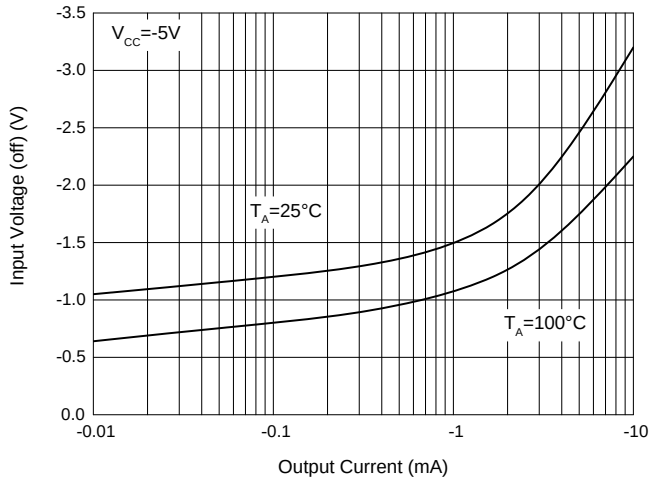


Fig. 4 - Output Voltage Characteristics

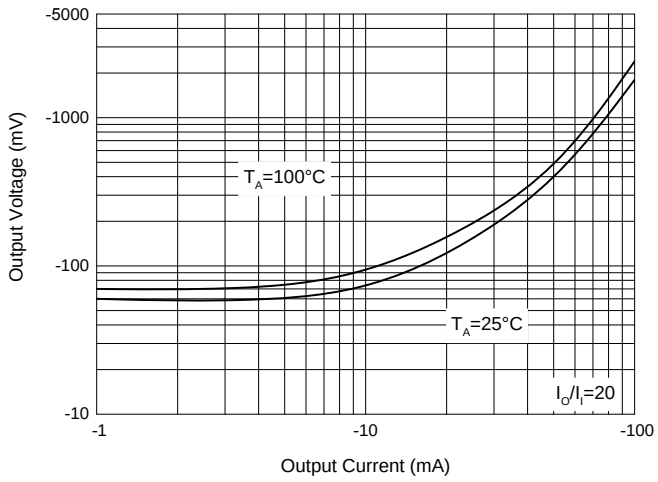
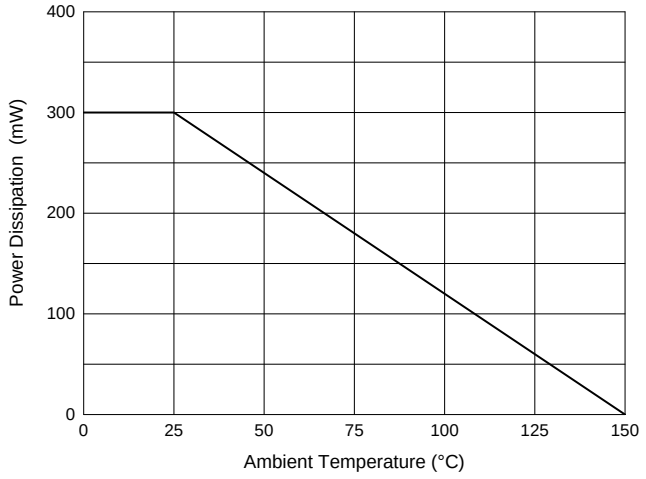


Fig. 5 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-AP	Ammo Packing: 30Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

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