

Features

- Built-In Biasing Resistors
- 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 Specified

- Thermal Resistance: 625°C/W Junction to Ambient

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	-10~+12	V
Output Current	I_O	500	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	-55~+150	°C
Storage Temperature	T_{stg}	-55~+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.



SOT-23

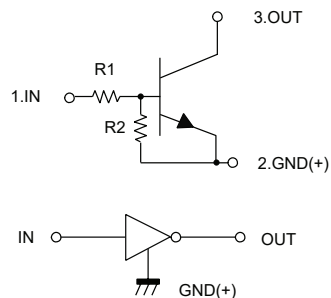
The diagram shows three views of the SOT-23 package: a top view with dimensions A through F, a side view with dimensions G through H, and a perspective view with dimensions J through L. Below the diagrams is a table of dimensions.

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	

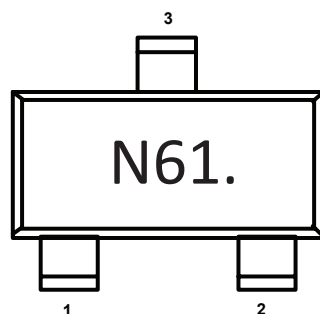
Suggested Solder Pad Layout

The diagram shows the suggested solder pad layout with dimensions in inches and millimeters. The dimensions are: 0.031 (0.800) for the top pad width, 0.035 (0.900) for the top pad length, 0.079 (2.000) for the top pad height, 0.037 (0.950) for the bottom pad width, and 0.037 (0.950) for the bottom pad length.

Internal Structure



Internal Structure



Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Input Voltage	$V_{I(off)}$	0.5	---	---	V	$V_{CC}=5V, I_O=100\mu A$
	$V_{I(on)}$	---	---	3.0	V	$V_O=0.3V, I_O=20mA$
Output Voltage	$V_{O(on)}$	---	---	0.3	V	$I_O=50mA, I_I=2.5mA$
Input Current	I_I	---	---	3.8	mA	$V_I=5V$
Output Current	$I_{O(off)}$	---	---	0.5	μA	$V_{CC}=50V, V_I=0$
DC Current Gain	G_I	20	---	---		$V_O=5V, I_O=20mA$
Input Resistance	R_1	1.5	2.2	2.9	K Ω	
Resistance Ratio	R_2/R_1	0.8	1.0	1.2		
Transition Frequency	f_T	160	---	---	MHz	$V_{CE}=10V, I_E=-50mA, f=100MHz$

Curve Characteristics

Fig. 1 - DC Current Gain Characteristics

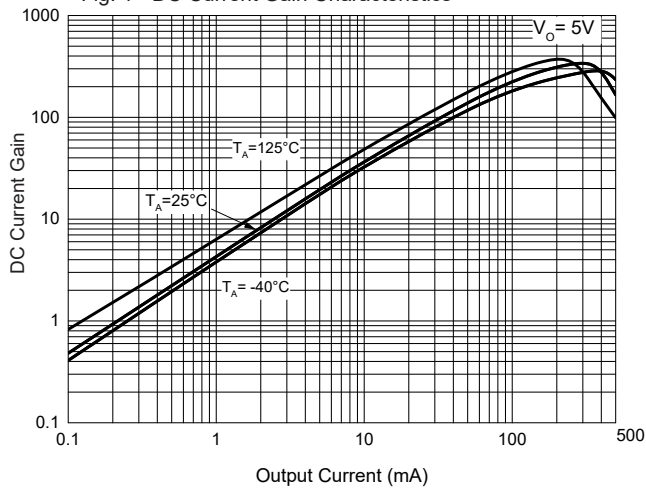


Fig. 2 - Input Voltage (on) Characteristics

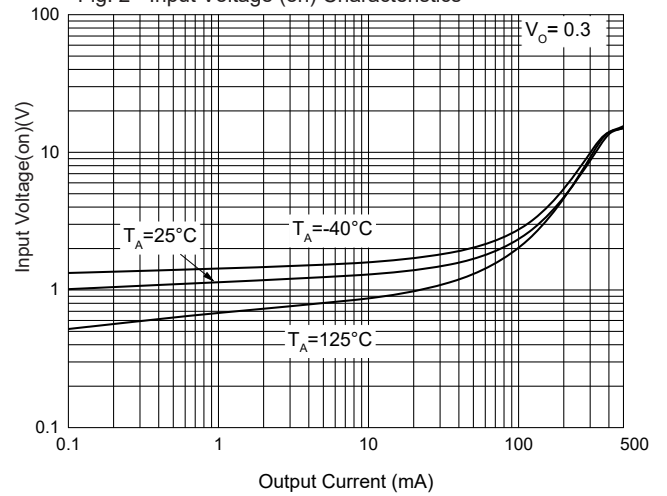


Fig. 3 - Input Voltage (off) Characteristics

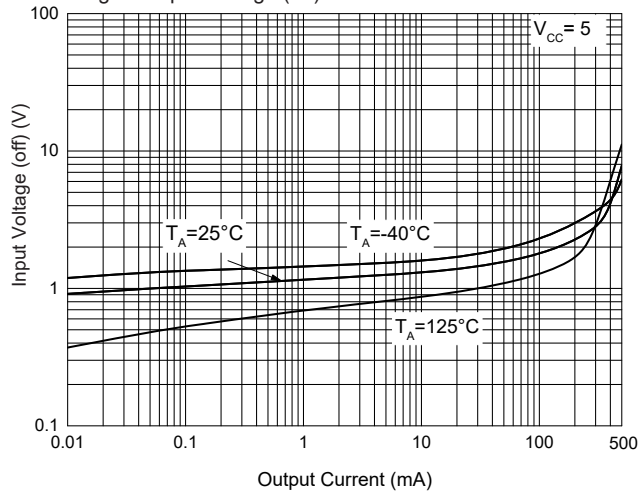


Fig. 4 - Output Voltage Characteristics

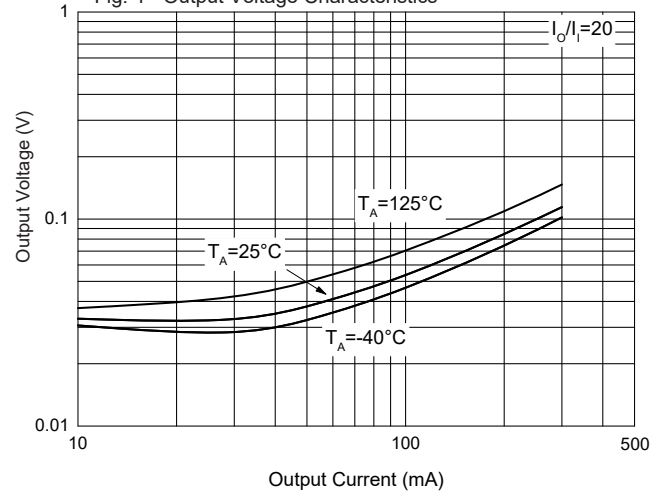
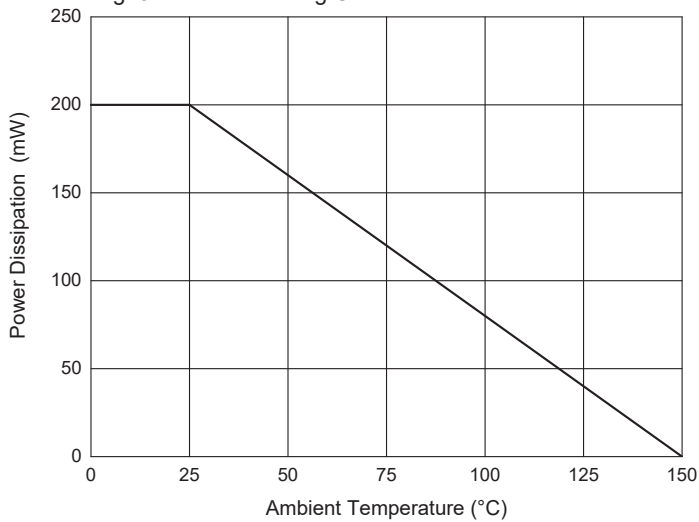


Fig. 5 - Power Derating Curve



Ordering Information

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

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