Features

- 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)

NPN Surface Mount Transistor

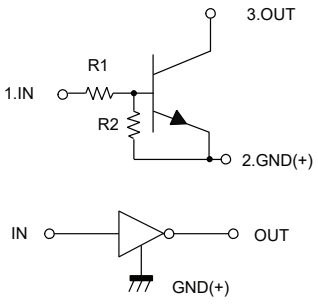
Maximum Ratings @ 25°C Unless Otherwise Specified

- Thermal Resistance: 833℃/W Junction to Ambient

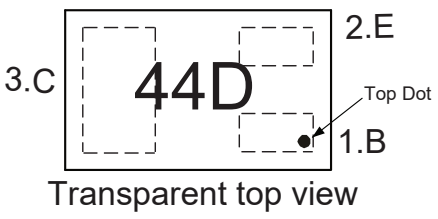
Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	-10~+40	V
Output Current	I_O	100	mA
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

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

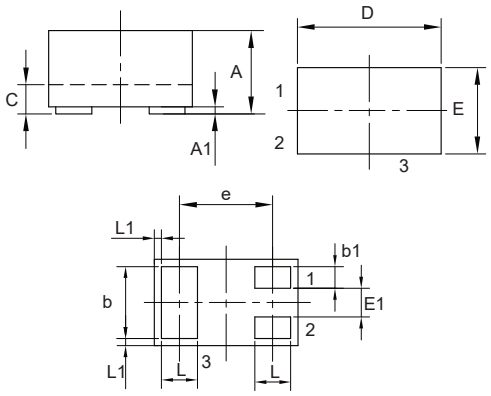
Internal Structure



Marking Code

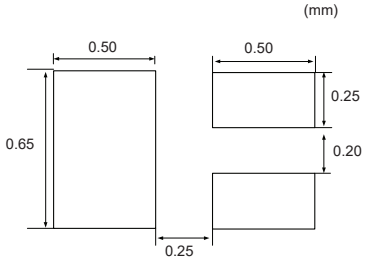


DFN1006-3



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
A1	0.000	0.002	0.00	0.05	
b	0.018	0.022	0.45	0.55	
b1	0.004	0.008	0.10	0.20	
c	0.005	0.007	0.12	0.18	
D	0.037	0.042	0.95	1.075	
E	0.022	0.026	0.55	0.675	
E1	0.006	0.010	0.15	0.25	
e	0.026		0.65		TYP.
L	0.008	0.012	0.20	0.30	
L1	0.0002		0.05		TYP.

Suggested Solder Pad Layout



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	200	---	---	MHz	V_{CE}=10V, I_E=5mA, f=100MHz

Curve Characteristics

Fig. 1 - DC Current Gain Characteristics

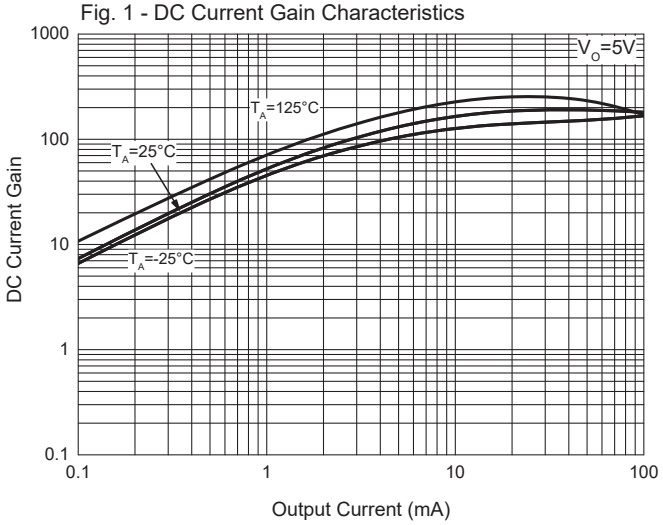


Fig. 2 - Input Voltage (on) Characteristics

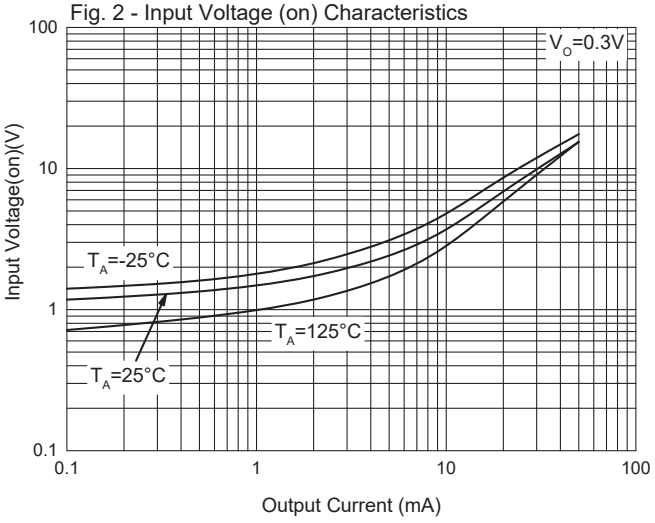


Fig. 3 - Input Voltage (off) Characteristics

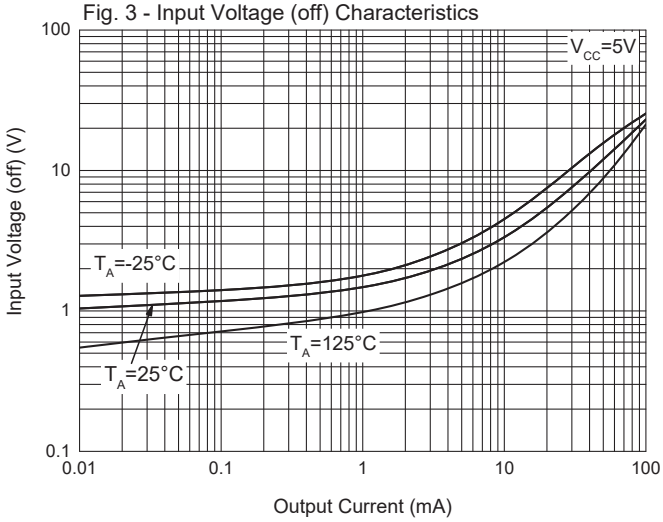


Fig. 4 - Output Voltage Characteristics

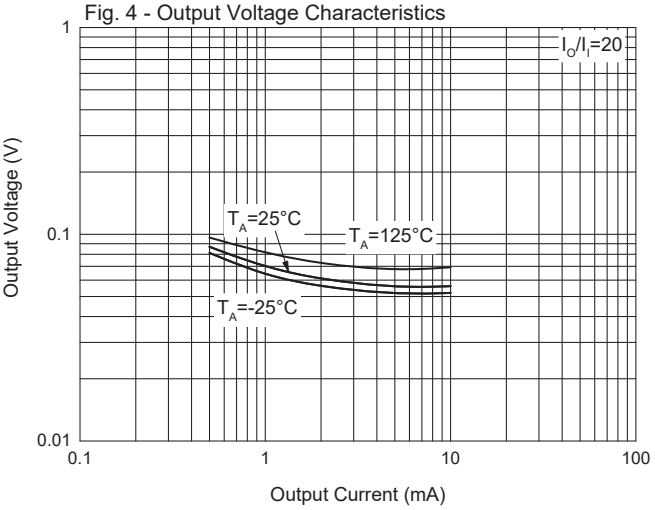
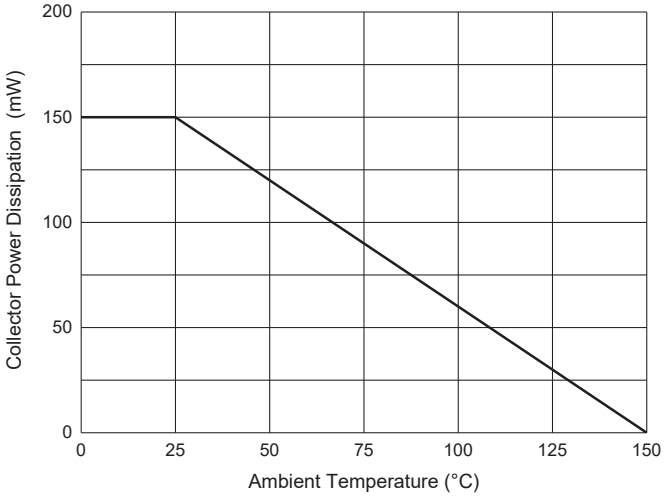


Fig. 5- Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel

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