

**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)

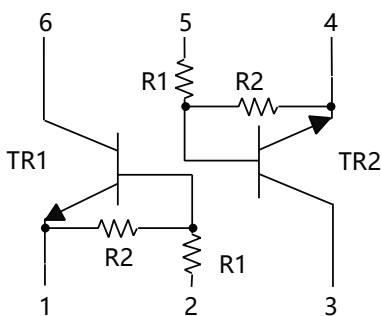
**Maximum Ratings @ 25°C Unless Otherwise Specified**

- Thermal Resistance: 625°C/W Junction to Ambient (Note 2)

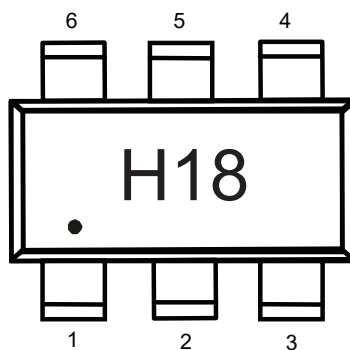
Parameter	Symbol	Value	Unit
Collector-emitter Voltage	$V_{CEO}$	50	V
Input Voltage	$V_{IN}$	-7~+20	V
Output Current	$I_O$	100	mA
Peak Collector Current	$I_{CM}$	100	mA
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{stg}$	-55~150	°C

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
2. Device mounted on an FR4 PCB, Single-sided copper, tin-plated and standard footprint.

Internal Structure:

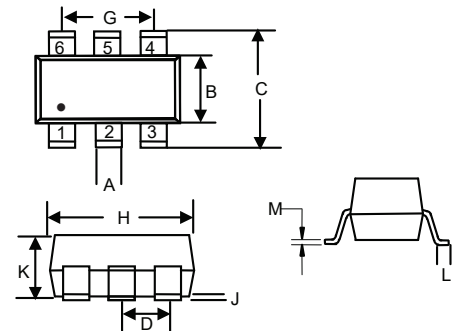


Device Marking:



**Dual NPN  
Digital Transistor**

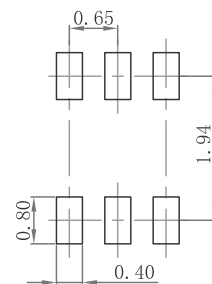
**SOT-363**



**DIMENSIONS**

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

Suggested Solder Pad Layout



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Input Voltage	$V_{I(off)}$	0.3	---	---	V	$V_{CC}=5V, I_O=100\mu A$
	$V_{I(on)}$	---	---	2.5	V	$V_O=0.3V, I_O=20mA$
Output Voltage	$V_{O(on)}$	---	---	0.3	V	$I_O=10mA, I_I=0.5mA$
Input Current	$I_I$	---	---	0.6	mA	$V_I=5V$
Output Current	$I_{O(off)}$	---	---	100	nA	$V_{CB}=50V, I_E=0$
Collector-emitter cut-off current	$I_{CEO}$	---	---	1	$\mu A$	$V_{CE}=30V, I_B=0$
DC Current Gain	$G_I$	50	---	---		$V_O=5V, I_O=10mA$
Input Resistance	$R_1$	3.3	4.7	6.1	K $\Omega$	
Resistance Ratio	$R_2/R_1$	1.7	2.1	2.6		
Transition Frequency	$f_T$	---	250	---	MHz	$V_{CE}=10V, I_E=5mA, f=100MHz$

**Curve Characteristics**

Fig. 1 - DC Current Gain Characteristics

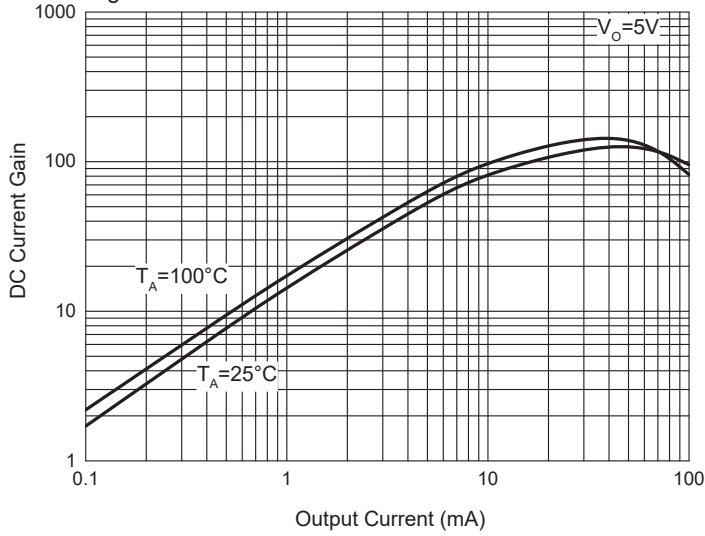


Fig. 2 - Input Voltage (on) Characteristics

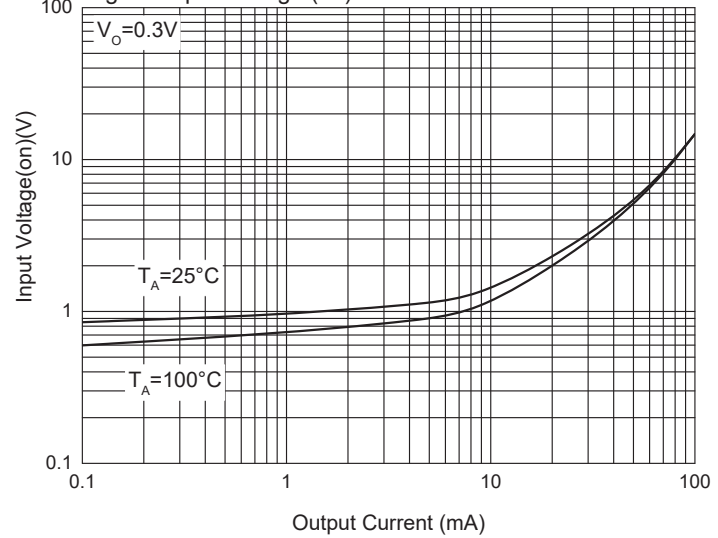


Fig. 3 - Input Voltage (off) Characteristics

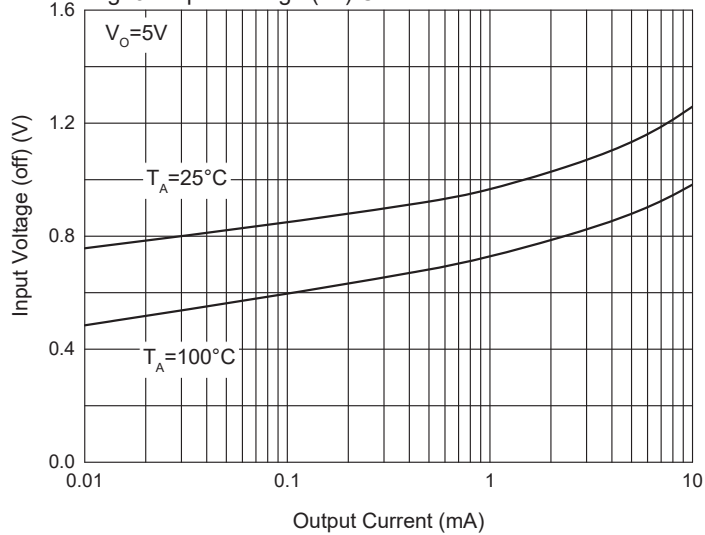


Fig. 4 - Output Voltage Characteristics

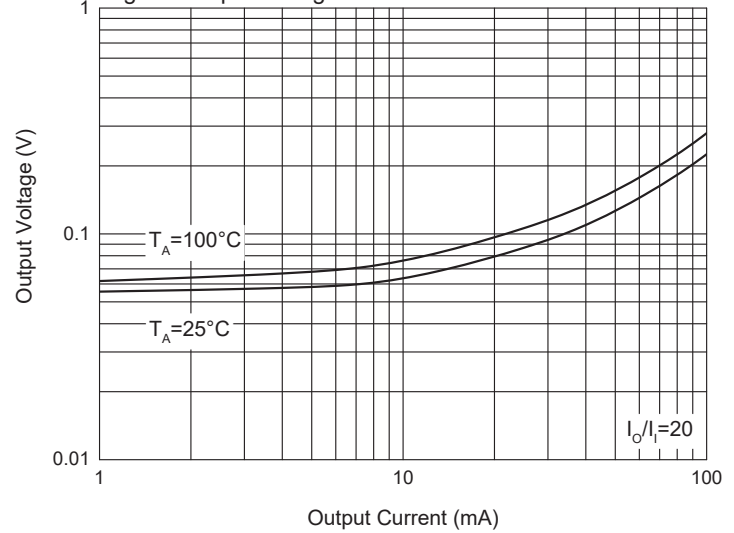
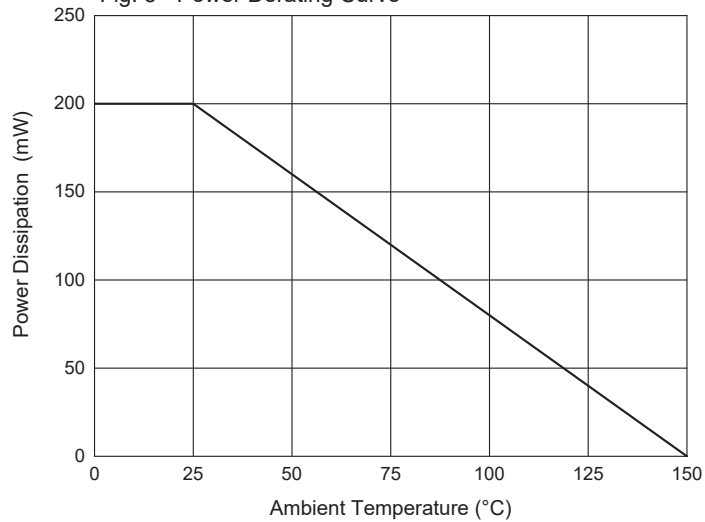


Fig. 5 - Power Derating Curve



**Ordering Information**

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

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