

1. IN
2. GND
3. OUT

SOT-23-3L

Features

-
- General switching and amplification
- Surface mount package ideally suited for automatic insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

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- Tin plated leads, solderable per J-STD-002 and JESD22-B102

Maximum Ratings ($T_a=25$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				TL
Collector-base voltage	V_{CC}	V		50
Collector-emitter voltage	V_{IN}	V		-10 to +40
Collector current	I_o	mA		100
Power dissipation	P_D	mW		200
Junction temperature	T_J			-55 to +150
Storage temperature	T_{STG}			-55 to +150


Electrical Characteristics ($T_a=25$ Unless otherwise specified)

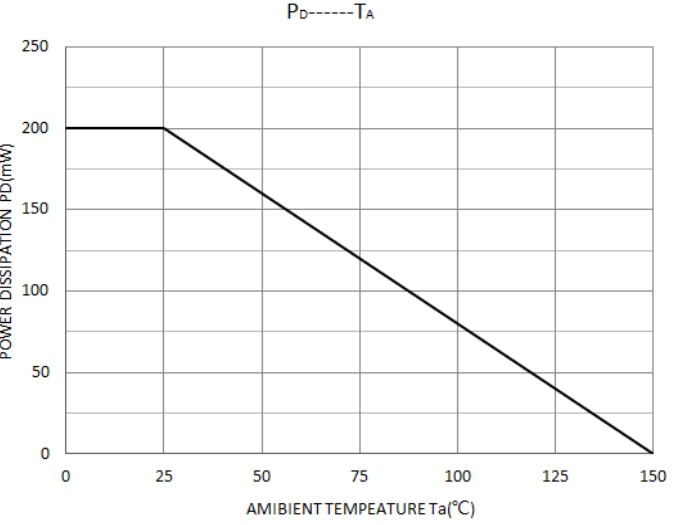
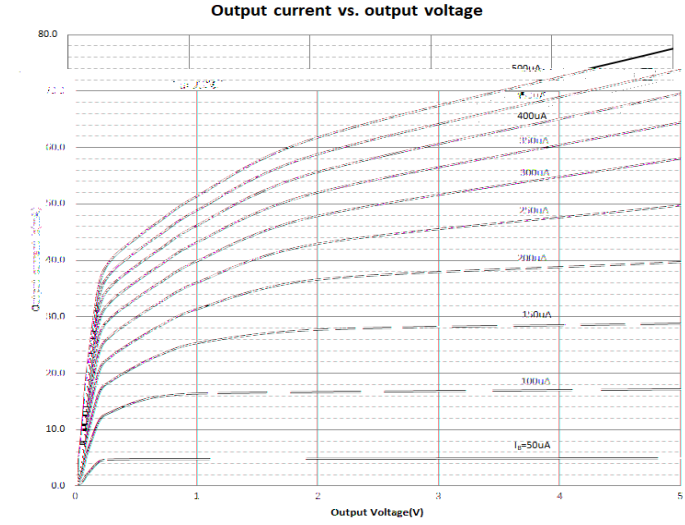
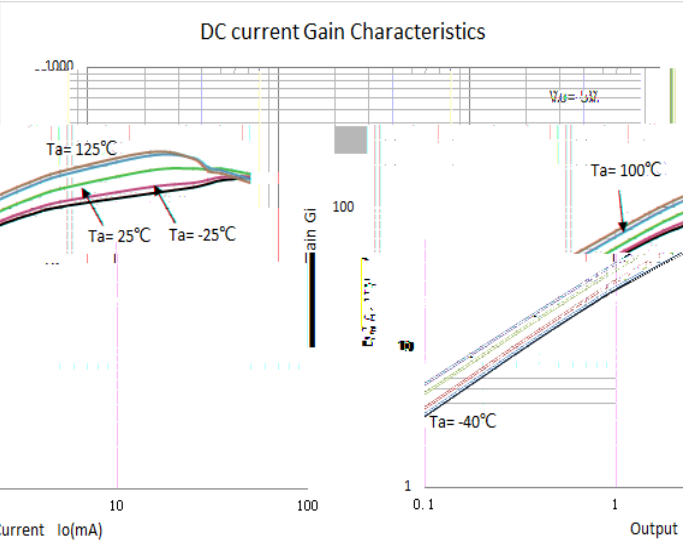
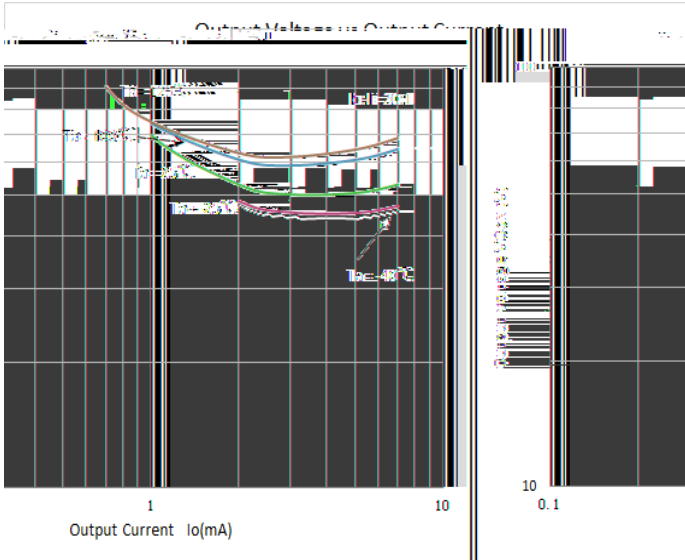
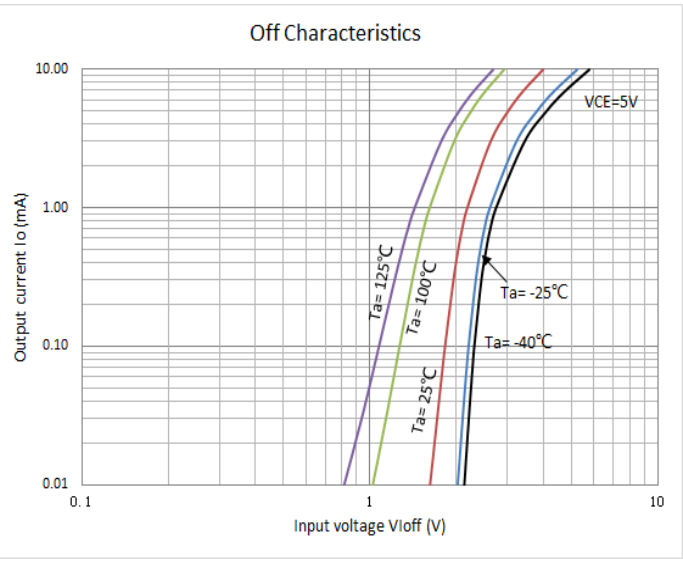
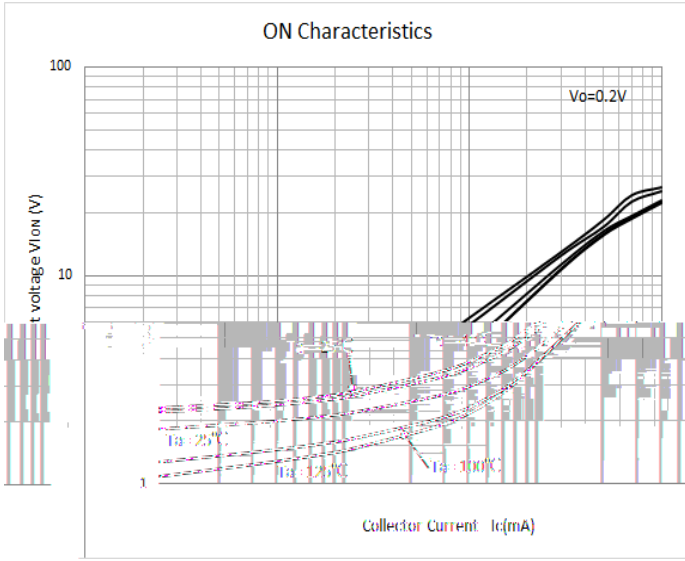
Item	Symbol	Unit	Conditions	Min	Typ	Max
Input voltage	$V_{I(off)}$	V	$V_{CC}=5V, I_c=100\mu A$	0.8		
	$V_{I(on)}$	V	$V_o=0.3V, I_c=2mA$			4
Output voltage	$V_{O(on)}$	V	$I_o / I_i = 10mA/0.5 mA$			0.3
Input current	I_i		$V_i=5V$			160
Output current	$I_{O(off)}$	μA	$V_{CC}=50V, V_i=0$			0.5
DC current gain	G_I		$V_o=5V, I_o = 5mA$	56		
Input resistance	R_1			33	47	61
Resistance ratio	R_2/R_1			0.37	0.47	0.57
Transition frequency	f_T	MHz	$V_o=10V, I_o=5mA, f=100MHz$		250	

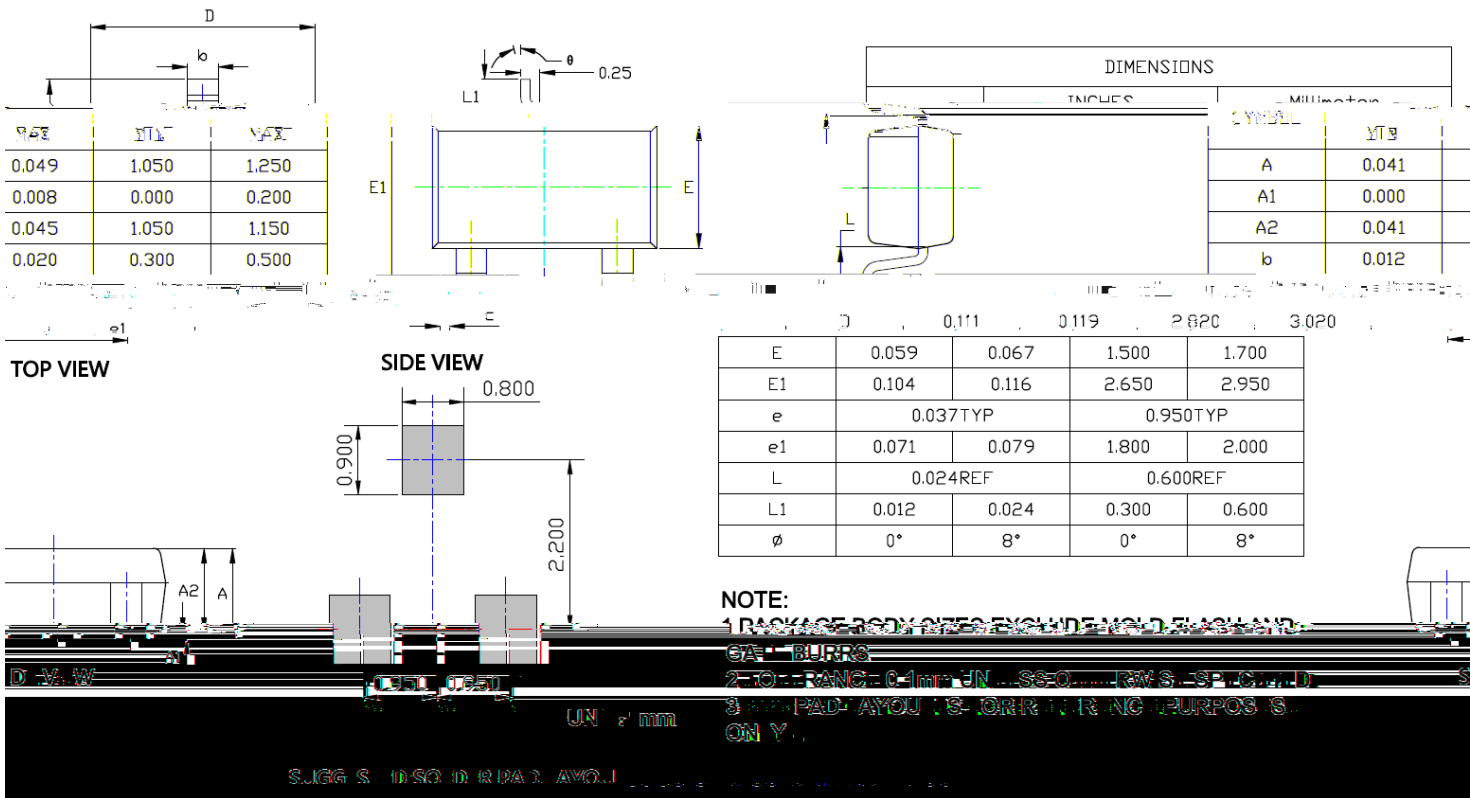
Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{-A}^{(1)}$	$^{\circ}W$	625
Thermal resistance, junction-to-case	$R_{-C}^{(1)}$	$^{\circ}W$	500

Note:

- 1 Device mounted on PCB, single-sided copper with standard footprint

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
DTC144WKA	F2	Approximate 0.014	3000	30000	120000	7





Note:

- All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
- General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]

1. Dimensions and tolerances shall conform to ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]

2. All dimensions shall be measured to one another within a maximum of 0.15mm, except as noted.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]

3. Dimension b does not include the maximum allowable mold mismatch.
[尺寸b不包括单边最大0.100mm的中筋凸出部分]

4. All dimensions shall be measured to one another within a maximum of 0.15mm, except as noted.
[所有尺寸均以毫米为单位，除非另有说明]

5. Dimensions D and E are the overall extreme out dimensions excluding mold flash, lead mold mismatch, and gate residues. Dimensions D and E shall be measured to the sectioning plane.
[尺寸D和E是整体极端外部尺寸，不包括毛刺、引线模具不匹配和浇口残留。尺寸D和E应测量到剖切平面。]

6. Dimension b does not include the maximum allowable mold mismatch.
[尺寸b不包括单边最大0.100mm的中筋凸出部分]

7. Dimensions D and E are the overall extreme out dimensions excluding mold flash, lead mold mismatch, and gate residues. Dimensions D and E shall be measured to the sectioning plane.
[尺寸D和E是整体极端外部尺寸，不包括毛刺、引线模具不匹配和浇口残留。尺寸D和E应测量到剖切平面。]

8. ★ (*) is the key size.
[★ 标记为关键尺寸]



Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with