

1. IN  
2. GND  
3. OUT

**SOT-23-3L**

### Features

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- 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)

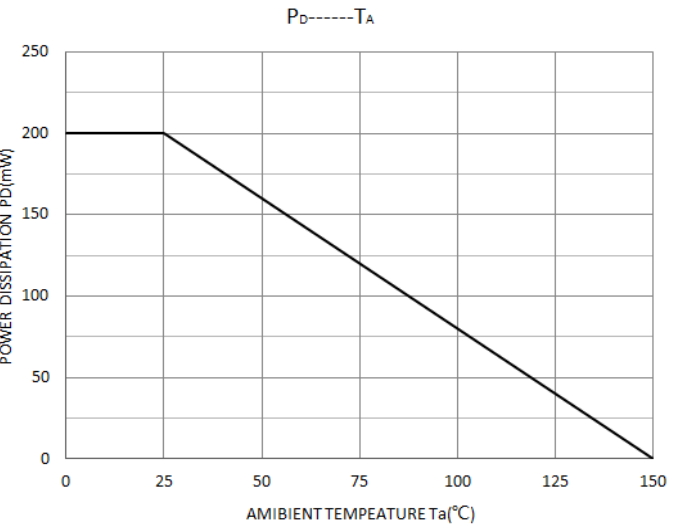
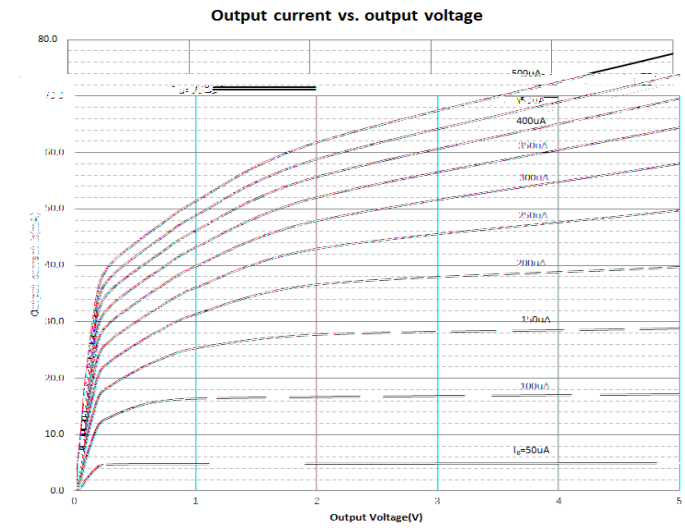
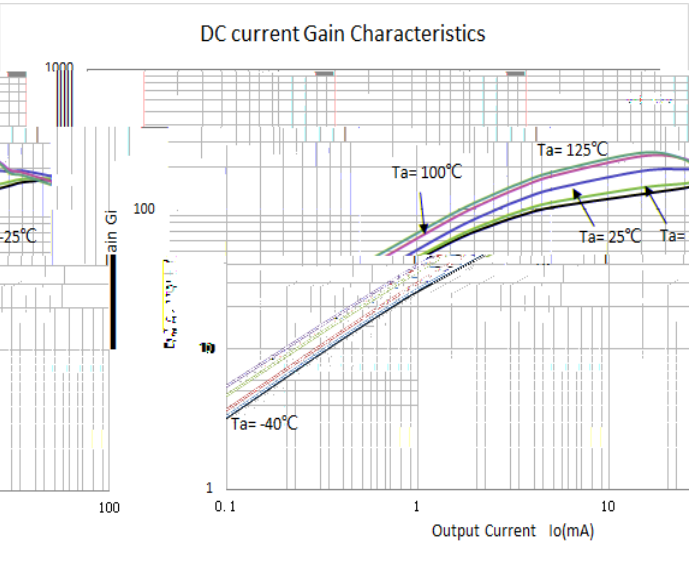
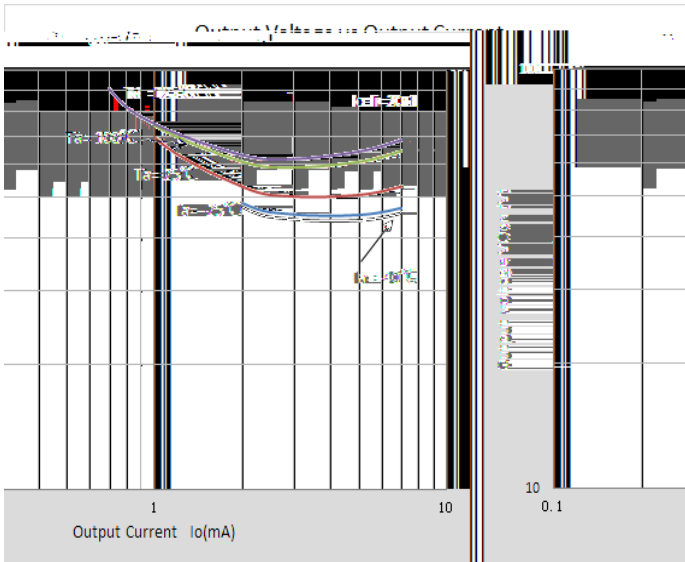
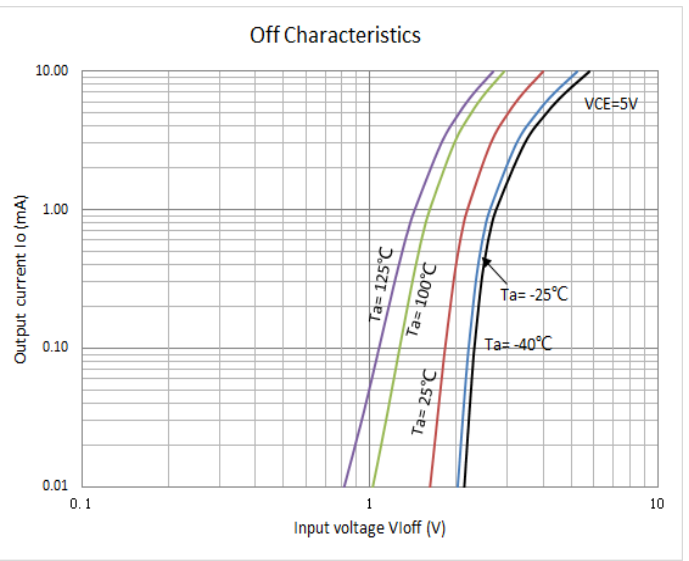
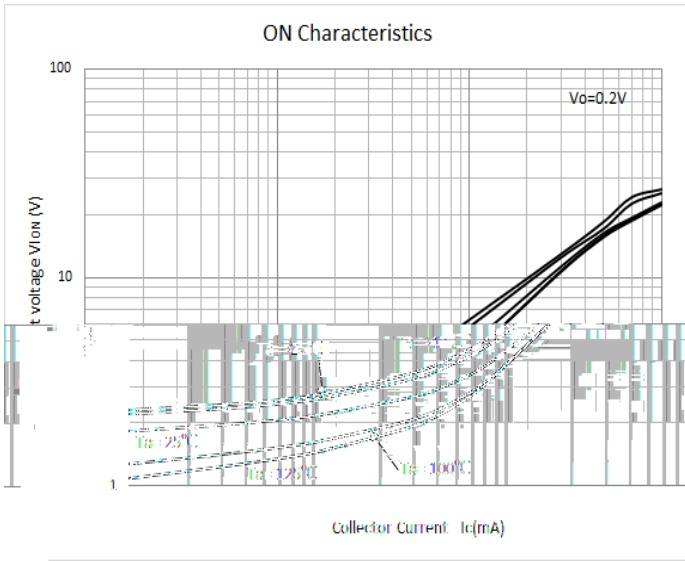
Item	Symbol	Unit	Conditions	Min	Typ	Max
Input voltage	$V_{I(off)}$	V	$V_{CC}=5V, I_c=100\mu A$	0.8		
	$V_{I(on)}$	V	$V_o=0.3V, I_c=2mA$			4
Output voltage	$V_{O(on)}$	V	$I_o / I_i = 10mA/0.5 mA$			0.3
Input current	$I_i$		$V_i=5V$			160
Output current	$I_{O(off)}$	$\mu A$	$V_{CC}=50V, V_i=0$			0.5
DC 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	

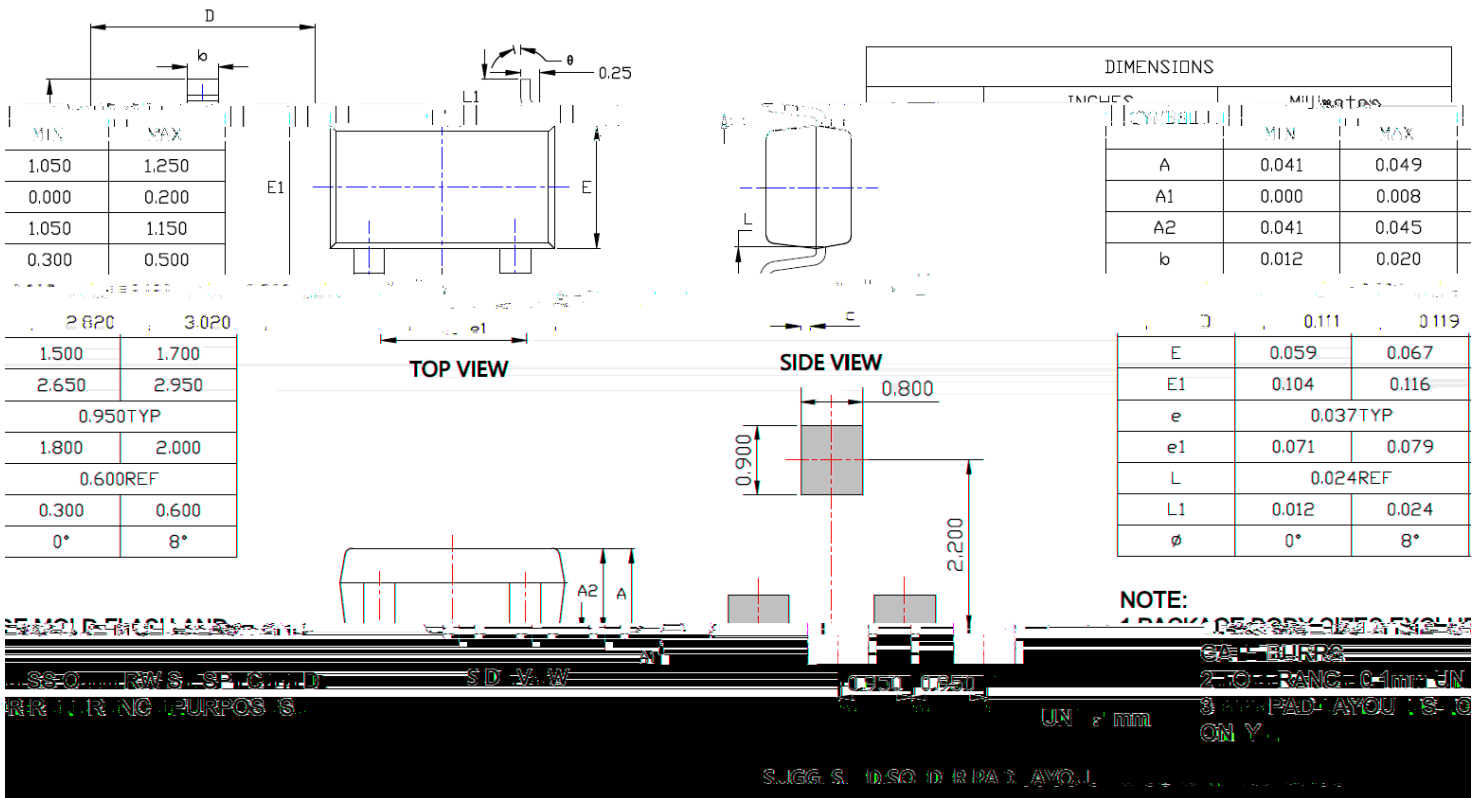
Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{-A}^{(1)}$	$^{\circ}W$	625
Thermal resistance, junction-to-case	$R_{-C}^{(1)}$	$^{\circ}W$	500

Note:

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

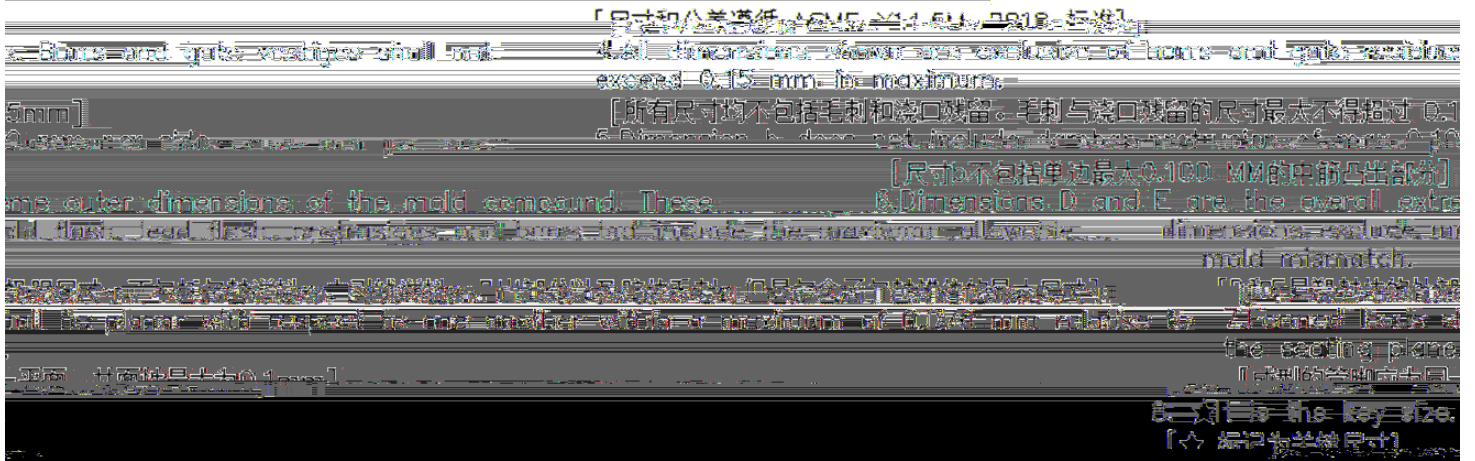
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
DTC144WKA	F2	Approximate 0.014	3000	30000	120000	7





**Note:**

1. 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]
2. General tolerances: ±0.10mm unless otherwise specified.  
[通用公差为±0.10mm, 除非另有说明]
3. Dimensions and tolerances are as per ASME Y14.5M-2018.





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