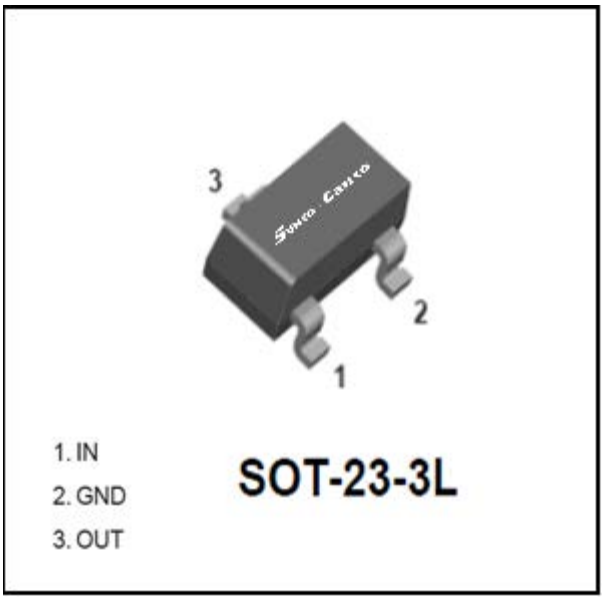
Digital Transistors (Built-in Resistors)



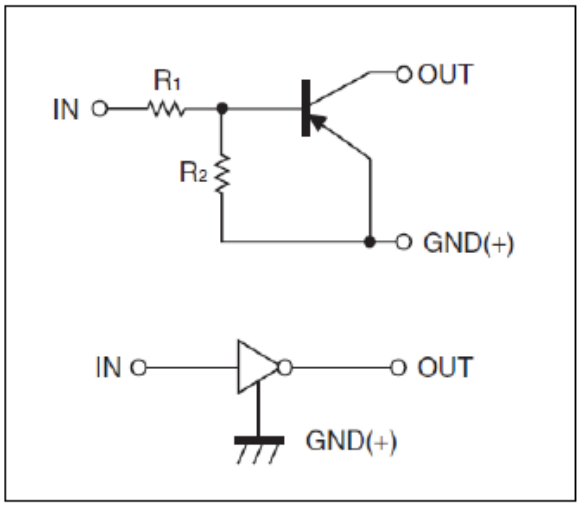
Features

●Epoxy meets UL-94 V-0 flammability rating
●Moisture Sensitivity Level 1
●Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
●Surface mount package ideally Suited for Automatic Insertion
●PNP

Mechanical Data

- **Package**: SOT-23-3L
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 14

■Equivalent circuit



■Maximum Ratings (Ta=25℃ Unless otherwise specified)

ITEM	SYMBOL	UNIT	VALUE
Supply Voltage	VCC	V	-50
Input Voltage	VIN	V	-40 to +10
Output Current	IO	mA	-100
Power Dissipation	PD	mW	200
Thermal Resistance, Junction to Ambient	R_{thJA}	℃/W	625
Junction Temperature	Tj	℃	150
Storage Temperature	Tstg	℃	-55 to +150

DTA114EKA

■Electrical Characteristics (Ta=25℃ unless otherwise specified)

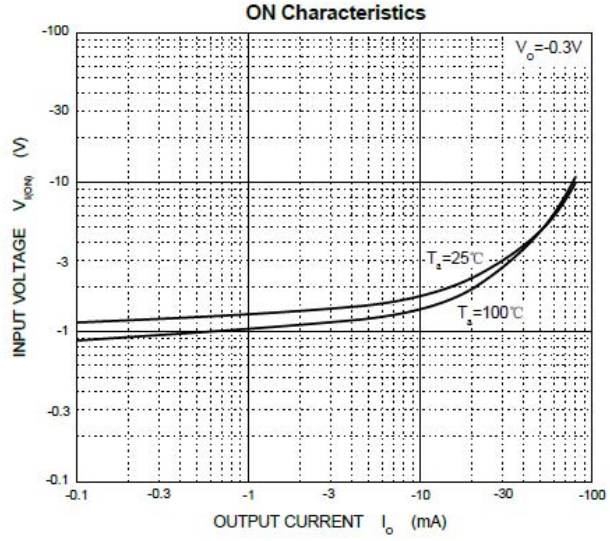
ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$VI_{(off)}$	V	VCC=-5V,Ic=-100uA	-0.5		
	$VI_{(on)}$	V	VO=-0.3V,Ic=-10mA			-3
Output voltage	$Vo_{(on)}$	V	Io /Ii =-10mA/-0.5 mA			-0.3
Input current	II	mA	VI=-5V			-0.88
Output current	$I_{O(off)}$	uA	VCC=-50V, Vi=0			-0.5
DC current gain	GI		Vo=-5V, Io =-5mA	30		
Input resistance	R_1	kΩ		7	10	13
Resistance ratio	R_2/R_1			0.8	1	1.2
Transition frequency	fT	MHz	Vo=-10V,IO=-5mA,f=100MHz		250	

■ Ordering Information (Example)

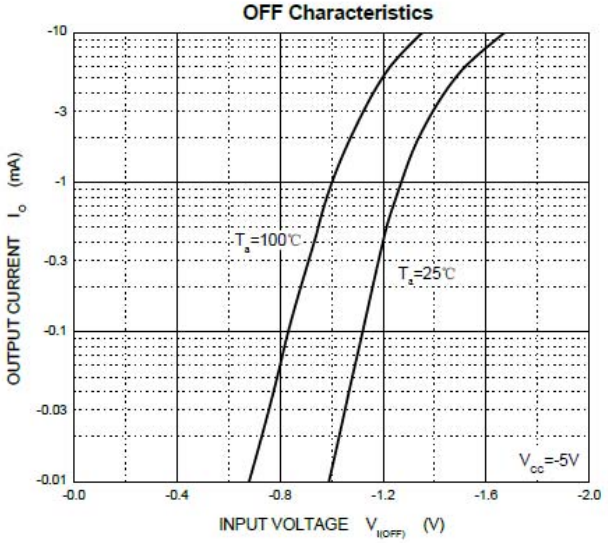
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DTA114EKA	F2	Approximate 0.014	3000	30000	120000	7” reel

■ **Characteristics** (Typical)

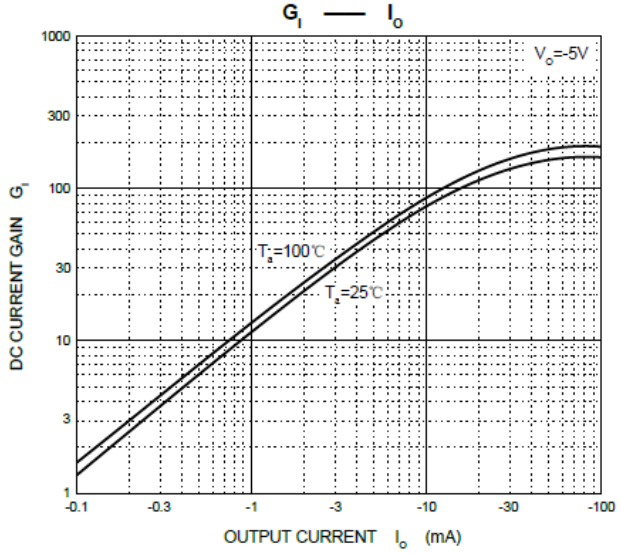
ON Characteristics



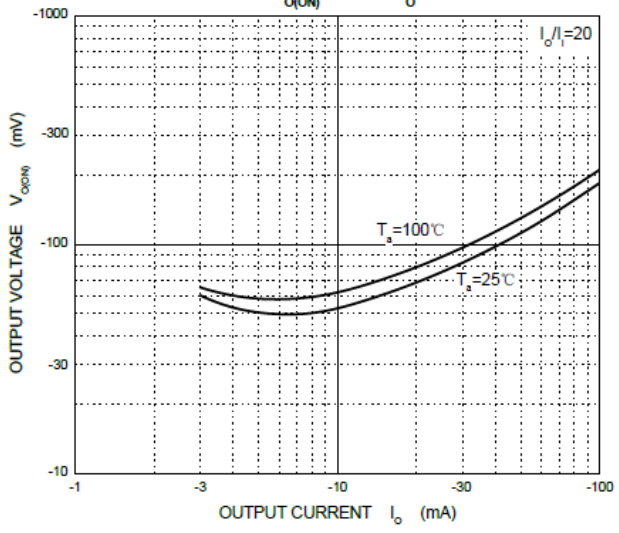
OFF Characteristics



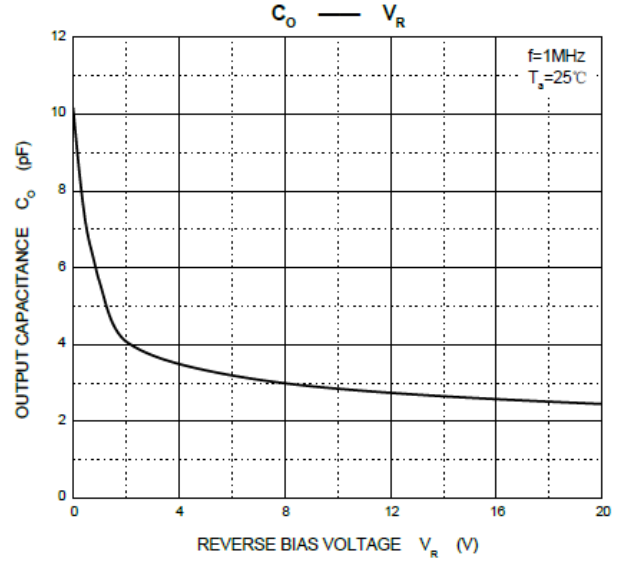
G_I — I_O



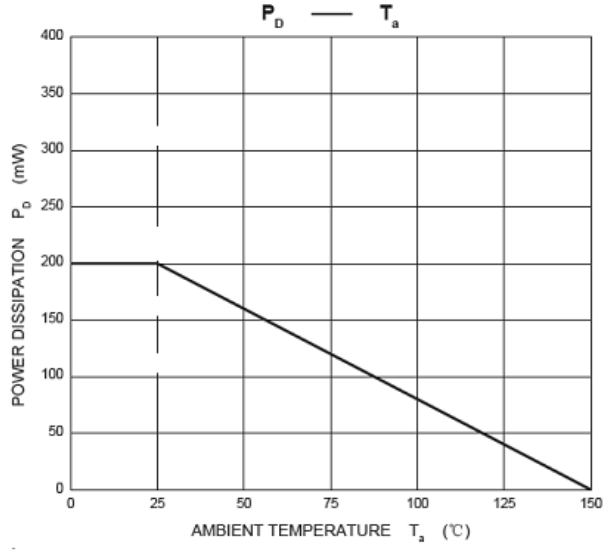
$V_{O(ON)}$ — I_O



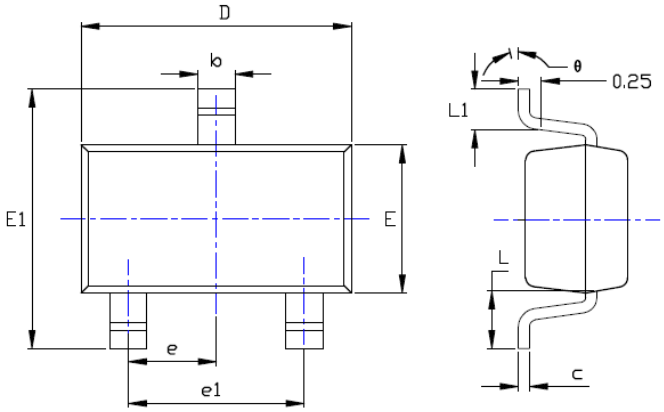
C_O — V_R

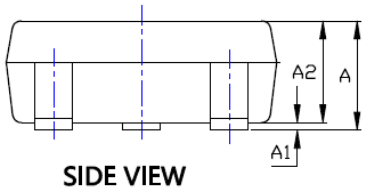


P_D — T_a



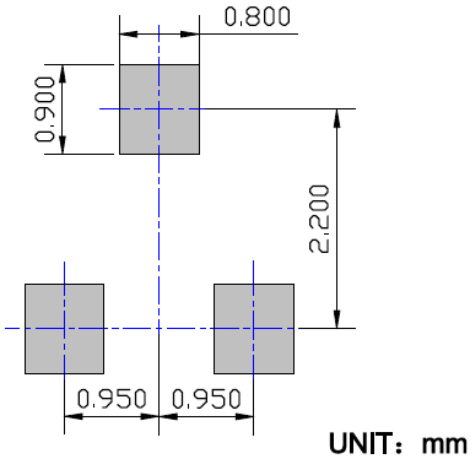
■SOT-23-3L Package Outline Dimensions





DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.041	0.049	1.050	1.250
A1	0.000	0.008	0.000	0.200
A2	0.041	0.045	1.050	1.150
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.111	0.119	2.820	3.020
E	0.059	0.067	1.500	1.700
E1	0.104	0.116	2.650	2.950
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.024REF		0.600REF	
L1	0.012	0.024	0.300	0.600
ø	0°	8°	0°	8°

■SOT-23-3L Suggested Pad Layout



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