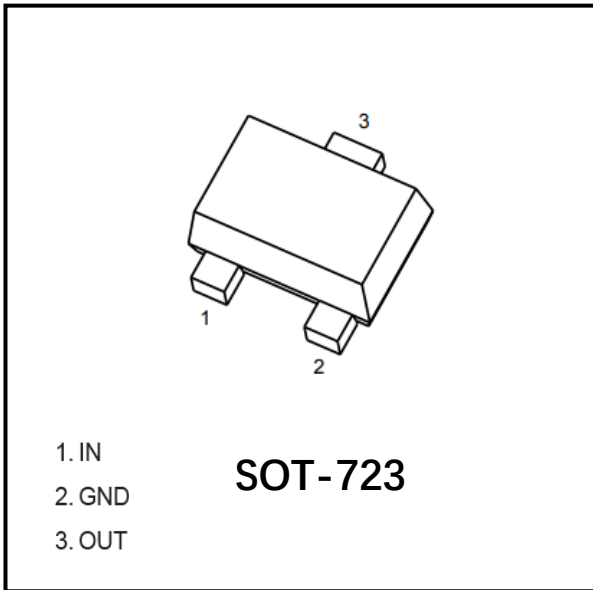


Digital Transistors (Built-in Resistors)



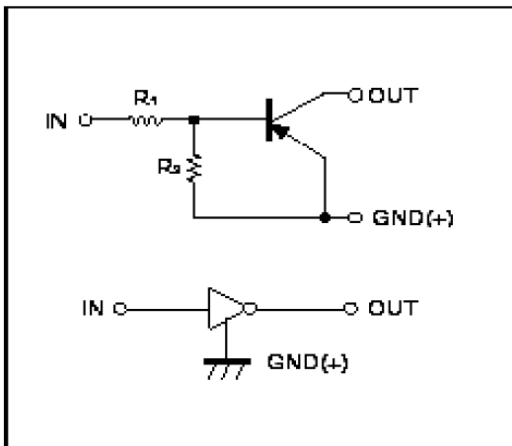
Features

- 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-723
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 14

■Equivalent circuit



■Maximum Ratings (Ta=25°C Unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	VALUE
Supply Voltage	VCC	V		-50
Input Voltage	VIN	V		-40 to 10
Output Current	IO	mA		-100
Power Dissipation	PD	mW		100
Junction Temperature	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150



DTA114EM

■ Electrical Characteristics (Ta=25°C unless otherwise specified)

ITEM	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Input voltage	$V_{I(off)}$	V	$V_{CC}=-5V, I_o=-100\mu A$ $V_o=-0.3V, I_o=-10mA$	-0.5	-	-
	$V_{I(on)}$	V		-	-	-3
Output voltage	$V_{O(on)}$	V	$I_o / I_i = -10mA / -0.5 mA$	-	-	-0.3
Input current	I_i	mA	$V_i = -5V$	-	-	-0.88
Output current	$I_{O(off)}$	μA	$V_{CC} = -50V, V_i = 0$	-	-	-0.5
DC current gain	G_i		$V_o = -5V, I_o = -5mA$	30	-	-
Input resistance	R_1	k Ω		7	10	13
Resistance ratio	R_2/R_1			0.8	1	1.2
Transition frequency	f_T	MHz	$V_o = -10V, I_o = 5mA$	-	250	-

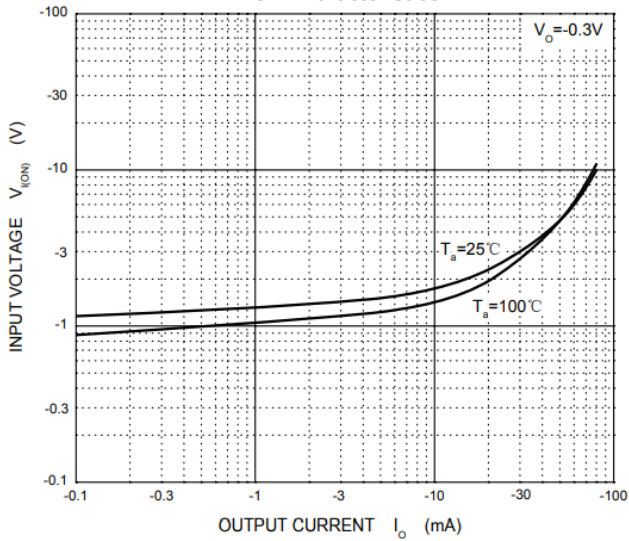
■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
DTA114EM	F2	Approximate 0.0013	8000	80000	320000	7" reel

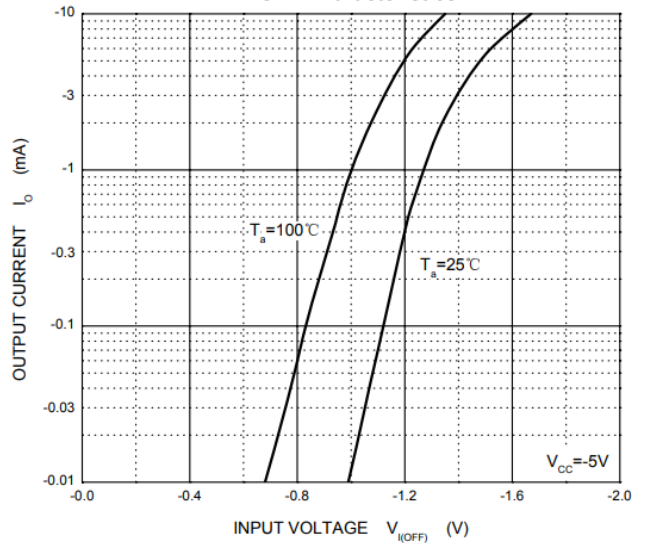


■ Characteristics (Typical)

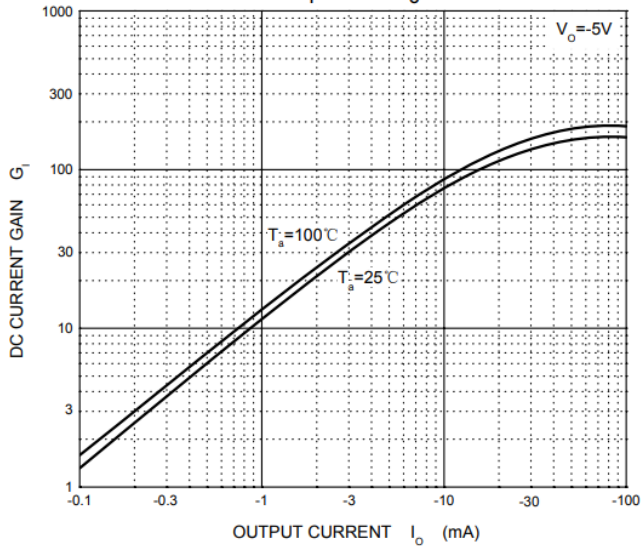
ON Characteristics



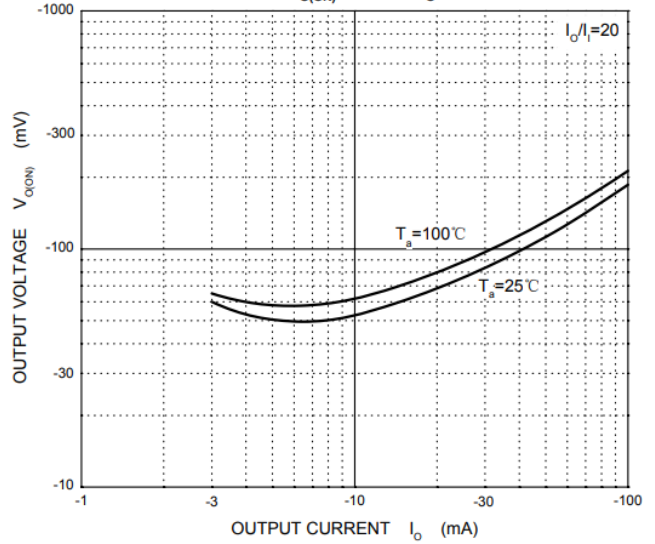
OFF Characteristics



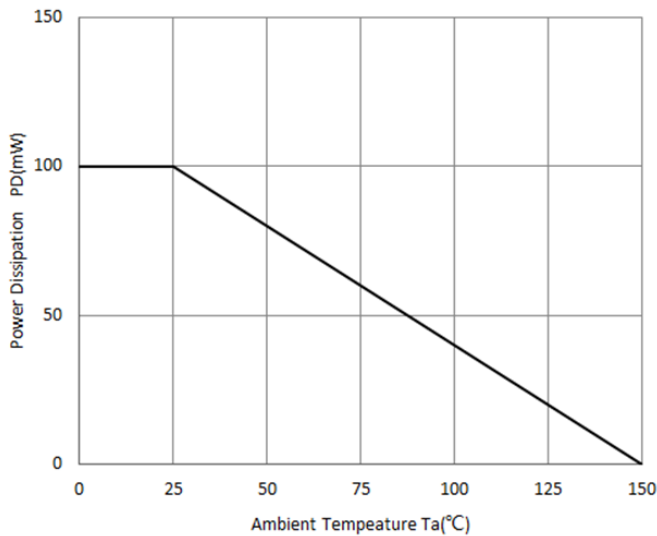
$G_I - I_O$



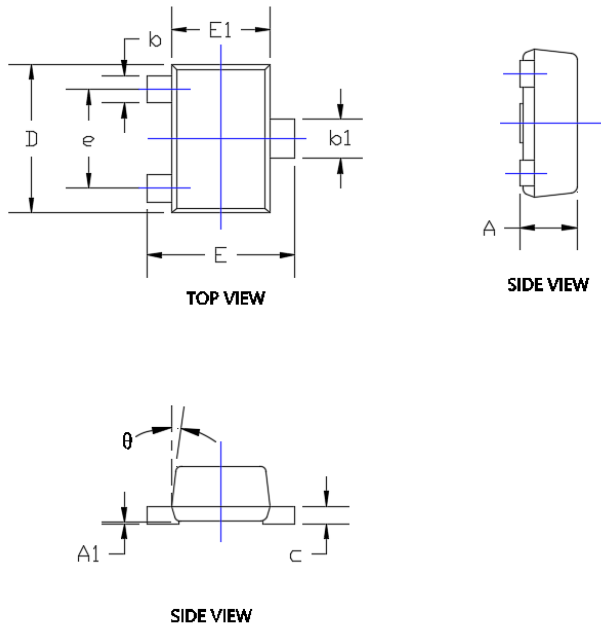
$V_{O(ON)} - I_O$



Power Derating Curve

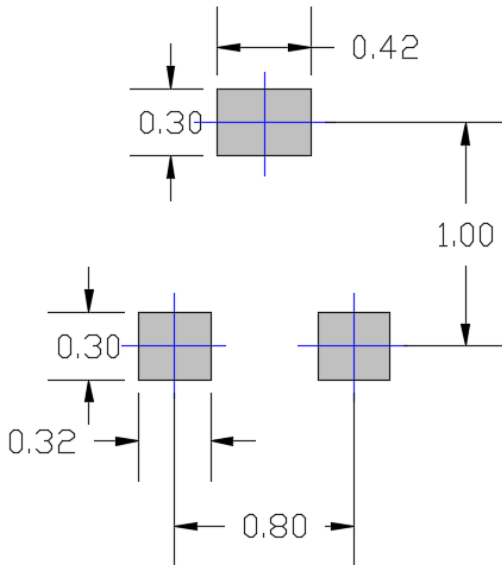


■SOT-723 Package Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.017	0.022	0.430	0.550
A1	0.000	0.002	0.000	0.050
b	0.007	0.011	0.170	0.270
b1	0.011	0.015	0.270	0.370
c	0.003	0.008	0.080	0.200
D	0.045	0.049	1.150	1.250
E	0.045	0.049	1.150	1.250
E1	0.030	0.033	0.750	0.850
e	0.031TYP.		0.800TYP.	
θ	7°REF.		7°REF.	

■SOT-723Suggested Pad Layout



NOTE:

1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



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