

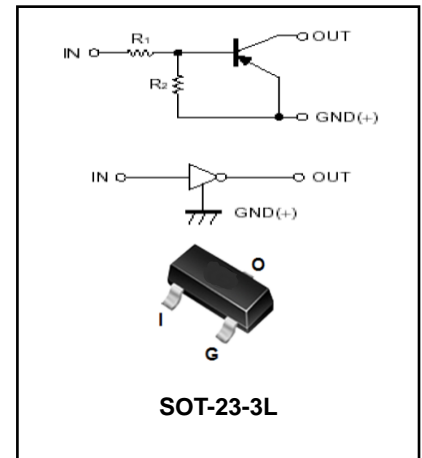


Features

- Epitaxial Planar Die Construction
- Complementary NPN Types Available (DTC)
- Built-in Biasing Resistors, $R_1=R_2$

Mechanical Data

- Case: SOT-23-3L
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208



Ordering Information

Part Number	Package	Shipping	Marking Code
DTA143EKA	SOT-23-3L	3000 pcs / Tape & Reel	13

Maximum Ratings (@ $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Units
MAXIMUM RATINGS			
V_{CC}	Supply Voltage	-50	V
V_{IN}	Input Voltage	+10 to -30	V
I_o	Output Current	-100	mA
I_c	Collector Current	-100	mA
Thermal Characteristic			
P_D	Total Power Dissipation, $T_a \leq 25^{\circ}\text{C}$	200	mW
T_J	Junction Temperature	-55 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$



Electrical Characteristics-TR1 (@TA=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC}=-5V, I_o=-100\mu A$	-0.5	-1.1	-	V
	$V_{I(on)}$	$V_o=-0.3V, I_o=-20mA$	-	-1.9	-3	V
Output Voltage	$V_{O(on)}$	$I_o=-10mA, I_I=-0.5mA$	-	-0.1	-0.3	V
Input Current	I_I	$V_I=-5V$	-	-	-1.8	mA
Output Current	$I_{O(off)}$	$V_{CC}=-50V, V_I=0V$	-	-	-0.5	μA
DC Current Gain	G_I	$V_o=-5V, I_o=-10mA$	20	-	-	-
Input Resistor	R_1		3.29	4.7	6.11	k Ω
Resistance ratio	R_2/R_1		0.8	1	1.2	
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_E=5mA,$ $f=100MHz$	-	250	-	MHz

Ratings and Characteristic Curves-TR1 (TA=25°C unless otherwise noted)

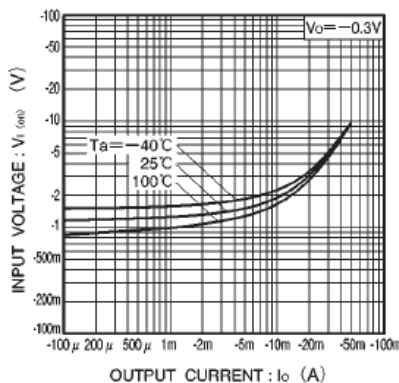


Fig.1 Input voltage vs. output current (ON characteristics)

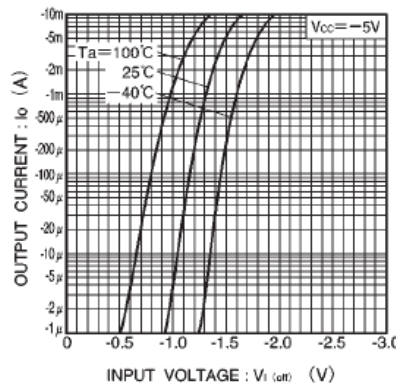


Fig.2 Output current vs. input voltage (OFF characteristics)

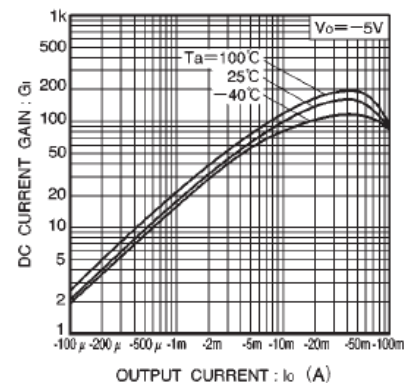
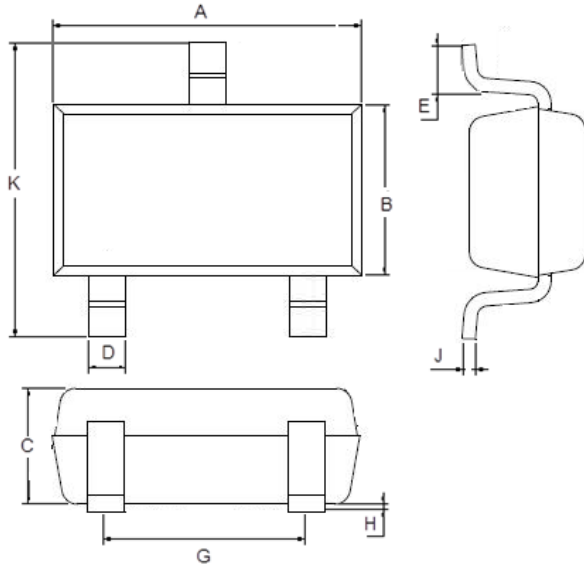


Fig.3 DC current gain vs. output current



Package Outline Dimensions(unit:mm)

SOT-23-3L



SOT-23-3L		
Dim	Min	Max
A	2.80	3.00
B	1.50	1.70
C	1.00	1.20
D	0.35	0.45
E	0.35	0.55
G	1.80	2.00
H	0.02	0.10
J	0.10	0.20
K	2.60	3.00

SOLDERING FOOTPRINT(unit:mm)

SOT-23-3L

