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PDTA143ZT

Digital Transistor

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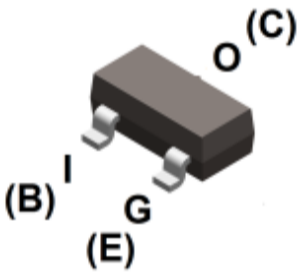
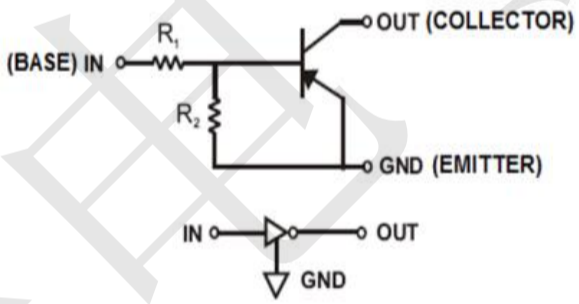
Features

- Epitaxial planar die construction
- Built-in biasing resistors (R_1: 4.7kΩ, $R_2$47kΩ)
- Also available in lead free version
- RoHS compliant with Halogen-free

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208





Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
		SOT-23	
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_I	+5 to -30	V
Output Current	I_O	-100	mA
Collector Current	$I_{C(Max)}$	-100	mA
Power Dissipation	P_D	200	mW
Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Voltage	$V_{I(OFF)}$	V_{CC} = -5V, I_O = -100μA	-0.5	-	-	V
Input Voltage	$V_{I(ON)}$	V_O = -0.3V, I_O = -5mA	-	-	-1.3	V
Output Voltage	$V_{O(on)}$	I_o = -5mA, I_I = -0.25mA	-	-	-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	80	-	-	-
Input Resistor	R_1		3.29	4.7	6.11	kΩ
Resistance ratio	R_2/R_1		8	10	12	-
Gain-Bandwidth Product	f_T	V_{CE} = -10V, I_E = -5mA f = 100MHz	-	250	-	MHz

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

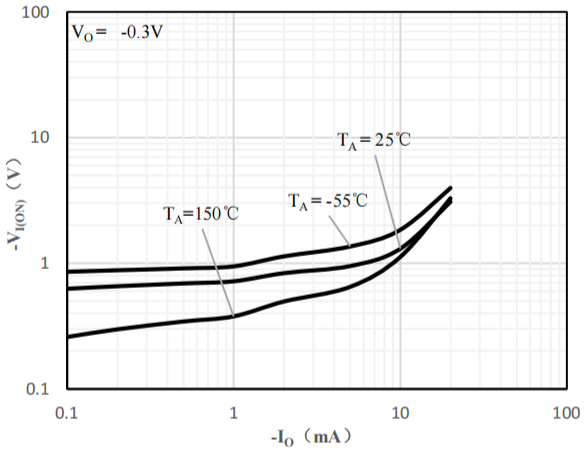


Fig 1 Input Voltage vs Output Current

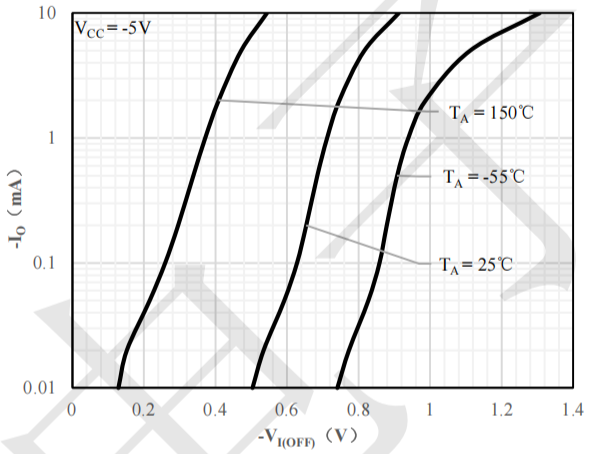


Fig 2 Output Current vs Input Voltage

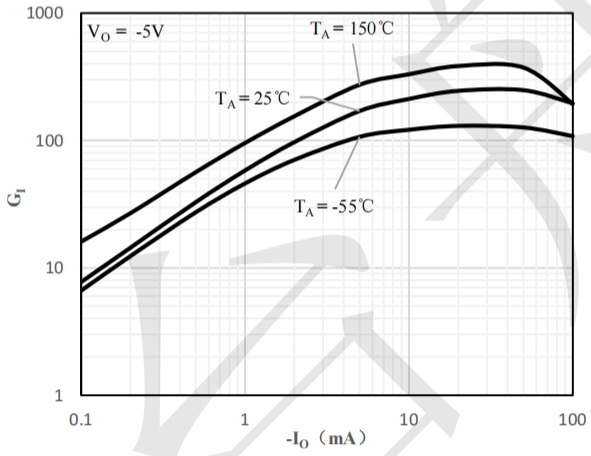


Fig 3 DC Current Gain vs Output Current

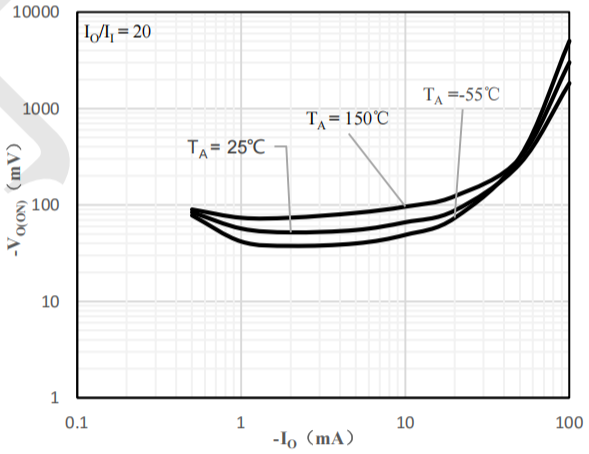
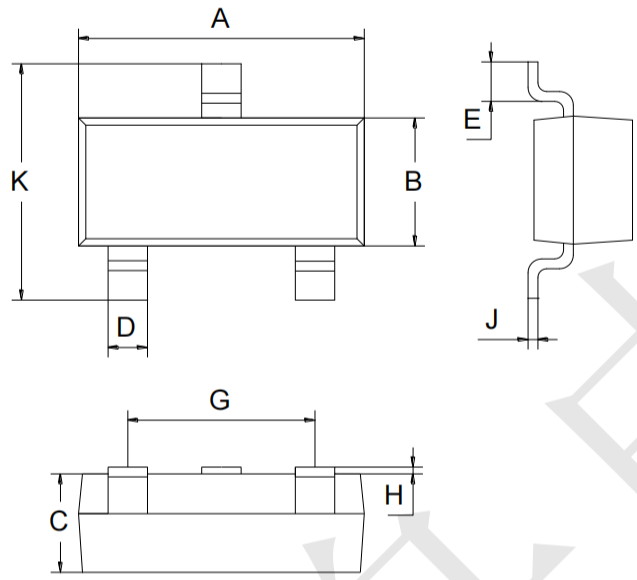


Fig 4 Output Voltage vs Output Current

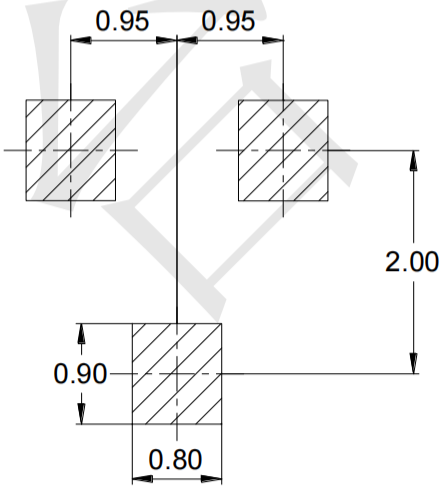
PACKAGE OUTLINE

SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm