

/ Descriptions

SOT-23

NPN

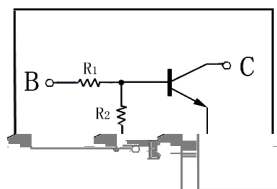
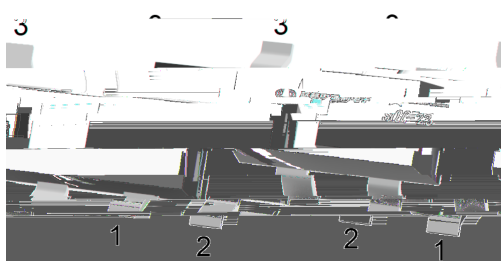
Silicon NPN Digital transistor in a SOT-23 Plastic Package.

/ Features

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, HF Product.

/ Applications

Switching, inverter circuit, interface circuit and driver circuit applications.

/ Equivalent Circuit**/ Pinning**

PIN 1 Base

PIN 2 Emitter

PIN 3 Collector

/ hFE Classifications & Marking

Marking	H43
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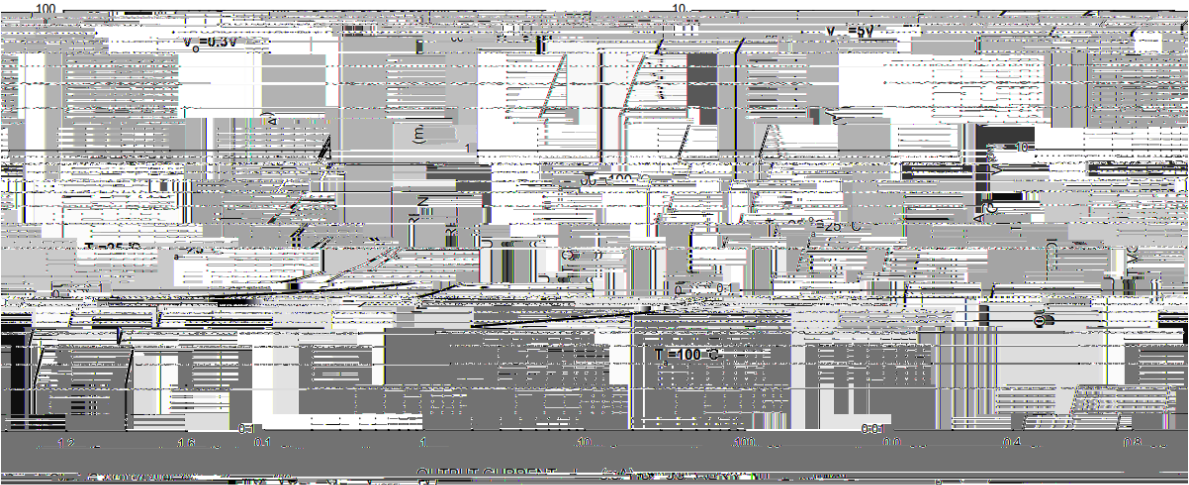
/ Absolute Maximum Ratings($T_a=25$)

Parameter	Symbol	Rating	Unit
Output Voltage	V_{CC}	50	V
Input Voltage	V_{In}	20	V
		-7.0	V
Output Current	I_o	100	mA
Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

/ Electrical Characteristics($T_a=25$)

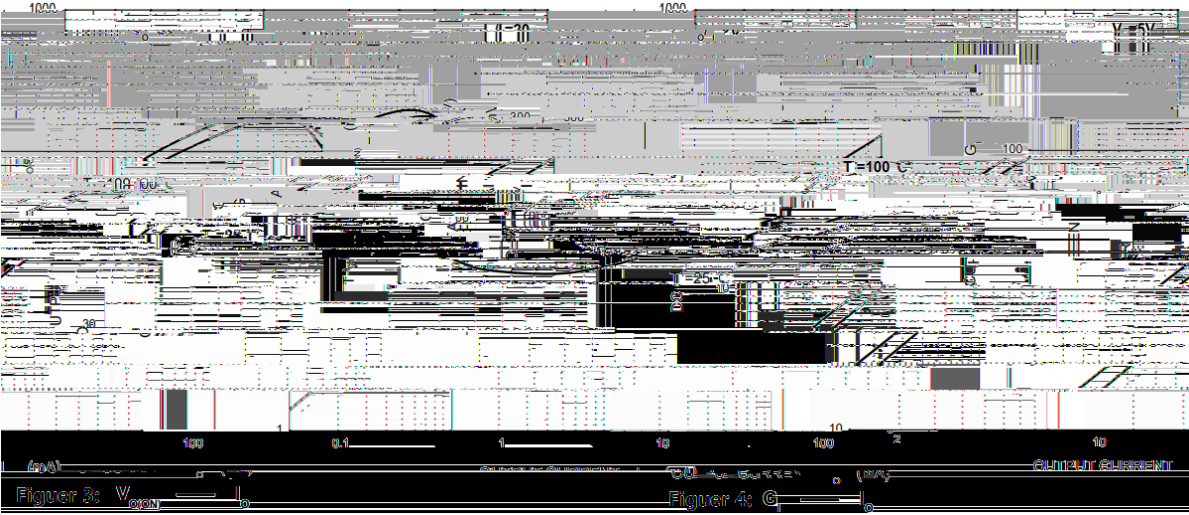
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	$V_{I(off)}$	$V_{CC}=5.0V$ $I_o=100\mu A$	0.3			V
	$V_{I(on)}$	$V_o=0.3V$ $I_o=20mA$			2.5	V
Output Voltage	$V_{O(on)}$	$I_o=10mA$ $I_i=0.5mA$		0.1	0.3	V
Input Current	I_i	$V_i=5.0V$			1.8	mA
Output Cut-off Current	$I_{O(off)}$	$V_{CC}=50V$ $V_i=0V$			0.5	μA
DC Current Gain	G_I	$V_o=5.0V$ $I_o=10mA$	30			
Transition Frequency	f_T	$V_{CE}=10V$ $I_C=5.0mA$ $f=100MHz$		250		MHz
Resistance1	R_1		3.29	4.7	6.11	K Ω
Resistance Ratio	R_2/R_1		1.7	2.1	2.6	

/ Electrical Characteristic Curve



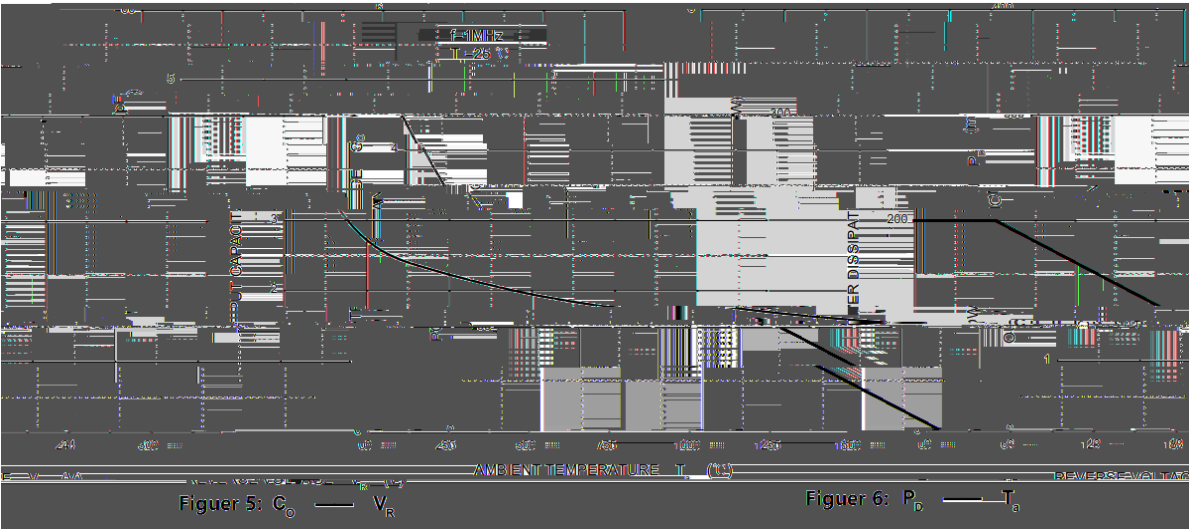
Figuer 2: OFF Characteristics

Figuer 1: ON Characteristics



Figuer 3: $V_{DS(on)}$

Figuer 4: g_m



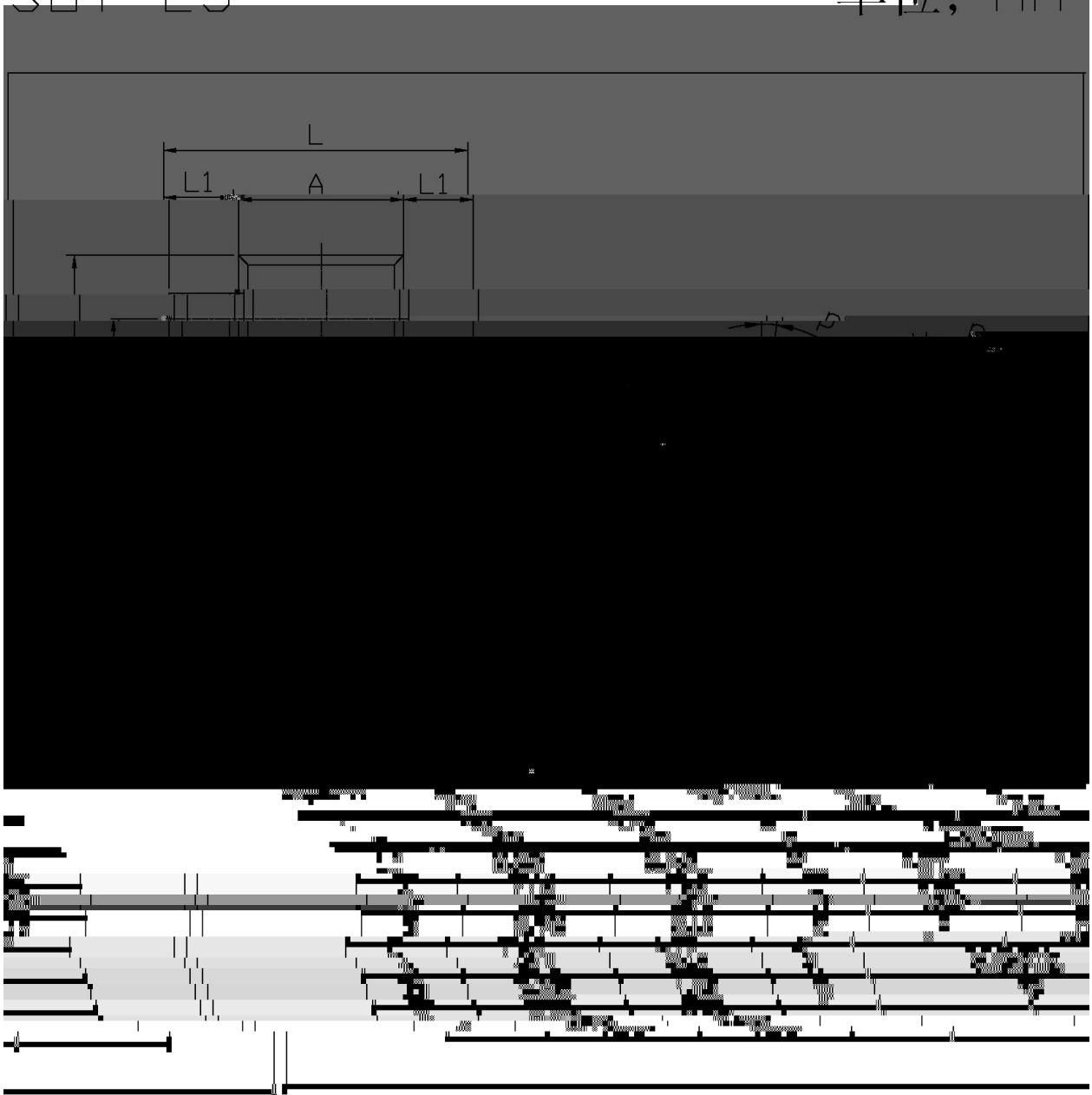
Figuer 5: C_{iss} — V_R

Figuer 6: P_D — T_A

/ Package Dimensions

SOT-23

单位: mm



, M y f / Marking Instructions

H43

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43 y ° Z W A
Note:
. y Company Code
43 y Product Type Code

DTC143XKA
Rev.I Jun.-2025



DATA SHEET