

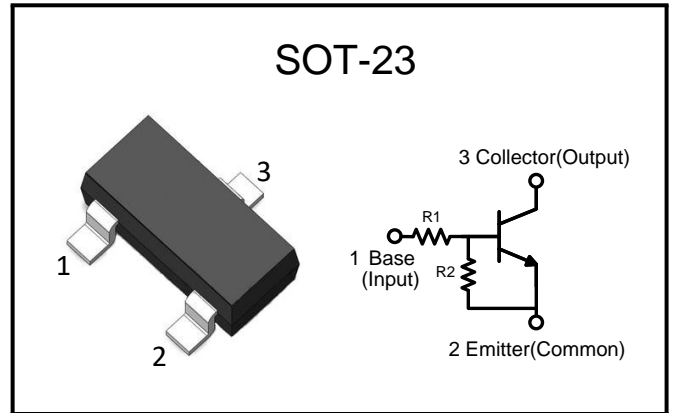
KRC103S

NPN Digital Transistor

Features

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

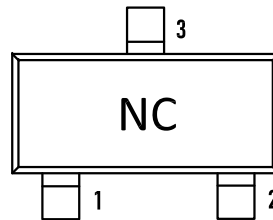
Package



Resistor Values/Marking Code

Type	R1 (KΩ)	R2 (KΩ)	Marking
KRC103S	22	22	NC

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
KRC103S	SOT-23	NC	3K	Tape and reel

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

Symbol	Parameter	Value	Unit
V _O	Output Voltage	50	V
V _I	Input Voltage	40,-10	V
I _D	Output Current	100	mA
P _{tot}	Total Power Dissipation	200	mW
T _J	Operating Junction	150	°C
T _{stg}	Storage Temperature Range	-55 to + 150	°C



Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
G_I	DC Current Gain	$V_O = 5\text{V}, I_O = 10\text{mA}$	70	–	–	V
$I_{O(OFF)}$	Output Cutoff Current	$V_O = 5\text{V}$	–	–	0.5	μA
I_I	Input Current	$V_I = 5\text{V}$	–	–	0.36	mA
$V_{O(ON)}$	Output Voltage	$I_O = 10\text{mA}, I_I = 0.5\text{mA}$	–	–	0.3	V
$V_{I(ON)}$	Input Voltage (ON)	$V_O = 0.2\text{V}, I_O = 5\text{mA}$	–	–	3	V
$V_{I(OFF)}$	Input Voltage (OFF)	$V_O = 5\text{V}, I_O = 0.1\text{mA}$	1	–	–	V
f_T	Transition Frequency	$V_O = 10\text{V}, I_O = 5\text{mA}$	–	200	–	MHZ

Typical Performance Characteristics($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1 : I_O vs. $V_{I(ON)}$

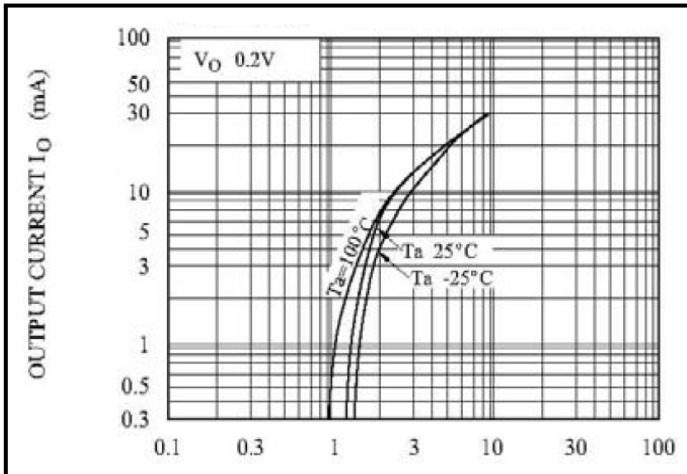


Figure 2 : I_O vs. $V_{I(OFF)}$

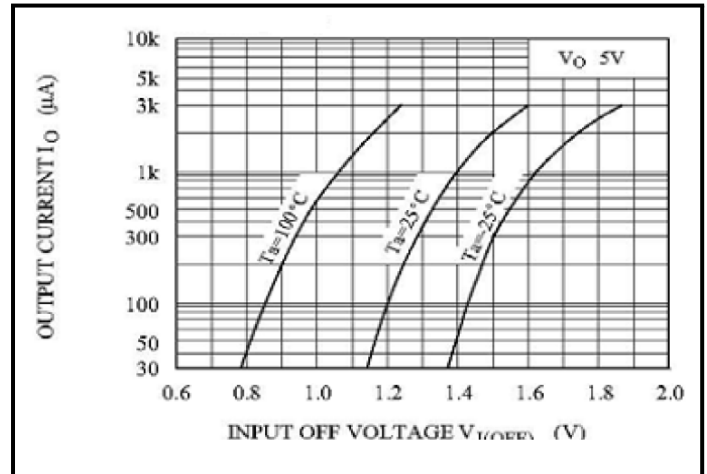
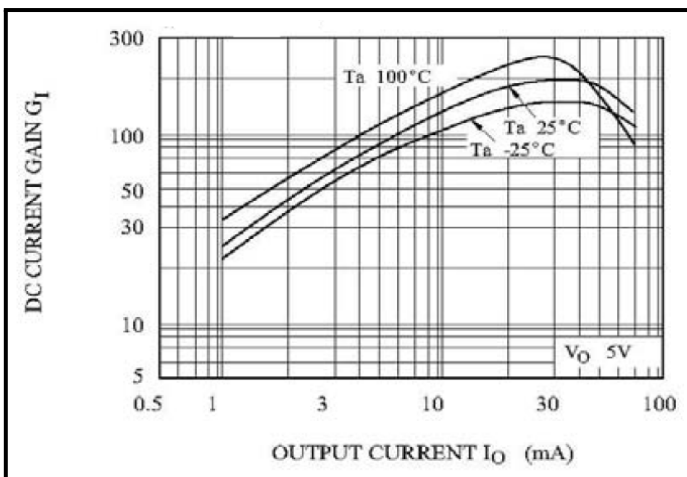


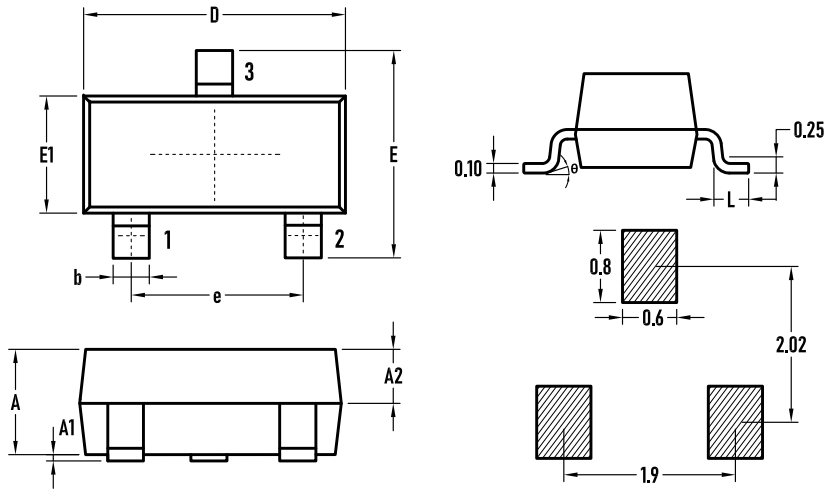
Figure 3 : G_I vs. I_O



KRC103S

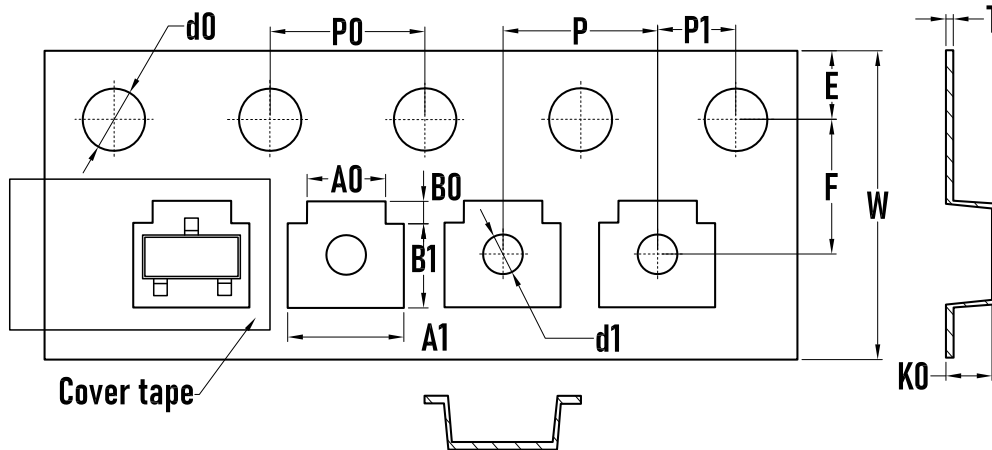
NPN Digital Transistor

Outline Drawing - SOT-23



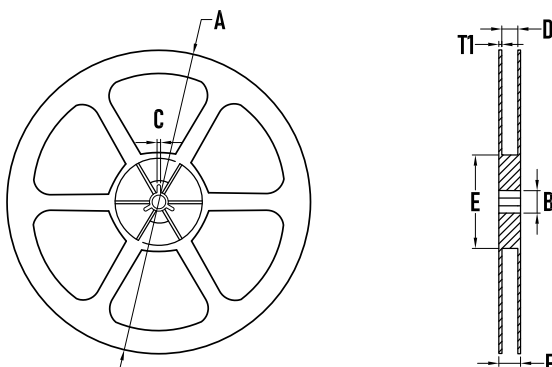
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.95	1.00	–
A1	0.02	0.06	0.10
A2	–	0.60	–
D	2.85	2.90	2.95
b	0.37	0.40	0.43
E	2.35	2.40	2.45
E1	1.25	1.30	1.35
e	1.85	1.90	1.95
L	0.35	0.40	0.48
θ	0	–	6°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	2.10±0.10
A1	3.10±0.10
B0	0.65±0.10
B1	2.75±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.10±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.20 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	3.1
C	13.50
D	9.6±0.3
E	75±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

**BORN SEMICONDUCTOR, INC. ALL
RIGHT RESERVED**

Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

Revision: 2022-Jan-1-A



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - Pre-Biased](#) category:

Click to view products by [Bourne](#) manufacturer:

Other Similar products are found below :

[DRC9A14E0L](#) [DTA124GKAT146](#) [DTA144WETL](#) [DTA144WKAT146](#) [DTC113EET1G](#) [DTC115TETL](#) [DTC115TKAT146](#)
[DTC144VUAT106](#) [MUN5241T1G](#) [BCR158WH6327XTSA1](#) [NSBA114TDP6T5G](#) [SMUN5330DW1T1G](#) [SSVMUN5312DW1T2G](#)
[RN1303\(TE85L,F\)](#) [RN1306\(TE85L,F\)](#) [EMH15T2R](#) [SMUN2214T3G](#) [SMUN5335DW1T1G](#) [NSBC143ZPDP6T5G](#) [NSVDTA143ZET1G](#)
[SMUN2214T1G](#) [FMA7AT148](#) [DTC114EUA-TP](#) [SMUN5237DW1T1G](#) [SMUN5213DW1T1G](#) [SMUN5114DW1T1G](#) [SMUN2111T1G](#)
[DTC124ECA-TP](#) [DTA114ECA-TP](#) [DTC113EM3T5G](#) [NSVMUN5135DW1T1G](#) [NSVMUN2237T1G](#) [NSVDTC143ZM3T5G](#)
[SMUN5335DW1T2G](#) [SMUN5216DW1T1G](#) [NSVMUN5316DW1T1G](#) [NSVMUN5215DW1T1G](#) [NSVMUN5213DW1T3G](#)
[NSVMUN2112T1G](#) [NSVIMD10AMT1G](#) [NSVEMC2DXV5T1G](#) [NSVDTC144WET1G](#) [NSVDTC123JET1G](#) [NSVDTA143EM3T5G](#)
[NSVB1706DMW5T1G](#) [NSBC143EDP6T5G](#) [RN2101,LF\(CT](#) [NSBA144WDXV6T1G](#) [DTA115TET1G](#) [NSBC115TDP6T5G](#)