BORN SEMICONDUCTOR

KRC106S

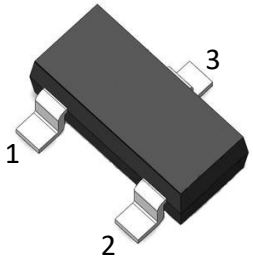
NPN Digital Transistor

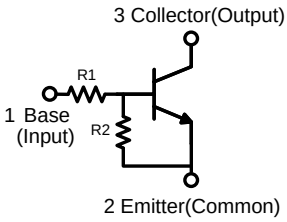
Features

- for switching
- interface circuit
- drive circuit applications

Package

SOT-23

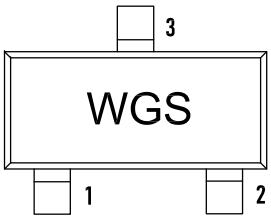




Resistor Values/Marking Code

Type	R1 (K)	R2 (K)	Marking
KRC106S	4.7	47	WGS

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
KRC106S	SOT-23	WGS	3K	Tape and reel

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	50	V
V_{CEO}	Collector Emitter Voltage	50	V
I_C	Collector 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

Revision: 2022-Jan-1-A

KRC106S

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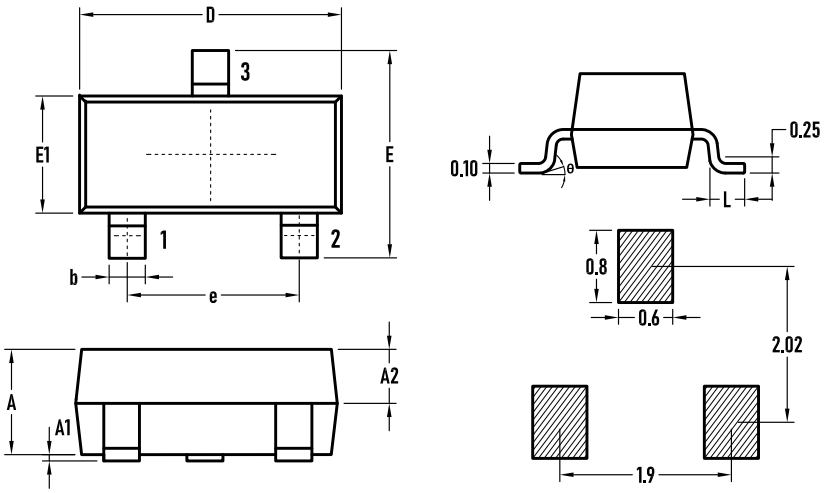
Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
h_{FE}	DC Current Gain	V_{CE} = 10V, I_C=5mA	80	–	–	
I_{CBO}	Collector Base Cutoff Current	V_{CB} = 50V	–	–	100	nA
I_{CEO}	Collector Emitter Cutoff Current	V_{CE} = 50V	–	–	500	nA
I_{EBO}	Emitter Base Cutoff Current	V_{EB} = 6V	–	–	0.18	mA
$V_{CBO(BR)}$	Collector Base Breakdown Voltage	I_C = 10uA	50	–	–	V
$V_{CEO(BR)}$	Collector Emitter Breakdown Voltage	I_C = 2mA	50	–	–	V
$V_{CE(sat)}$	Collector Emitter Saturation Voltage	I_C = 10mA,I_B = 0.3mA	–	–	0.25	V
		I_C = 10mA ,I_B = 5mA	–	–	0.25	
		I_C = 10mA,I_B = 1mA	–	–	0.25	
V_{OL}	Output Voltage (on)	V_{CC} = 5V,V_B = 2.5V,R_L = 1KΩ	–	–	0.2	V
		V_{CC} = 5V,V_B = 3.5V,R_L = 1KΩ	–	–	0.2	
		V_{CC} = 5V,V_B = 5V,R_L = 1KΩ	–	–	0.2	
V_{OH}	Output Voltage (off)	V_{CC} = 5V,V_B = 0.5V,R_L = 1KΩ	4.9	–	–	V
		V_{CC} = 5V,V_B = 0.05V,R_L = 1KΩ	4.9	–	–	
		V_{CC} = 5V,V_B = 0.25V,R_L = 1KΩ	4.9	–	–	
R_1	Input Resistor	–	15.4	–	28.6	KΩ
R_1/R_2	Resistor Ratio	–	0.055	–	0.185	–

KRC106S

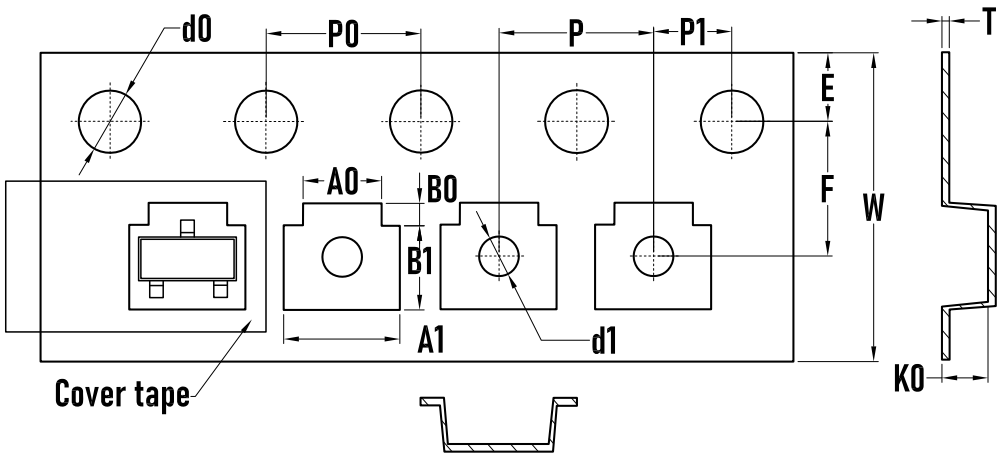
NPN Digital Transistor

Outline Drawing - SOT-23



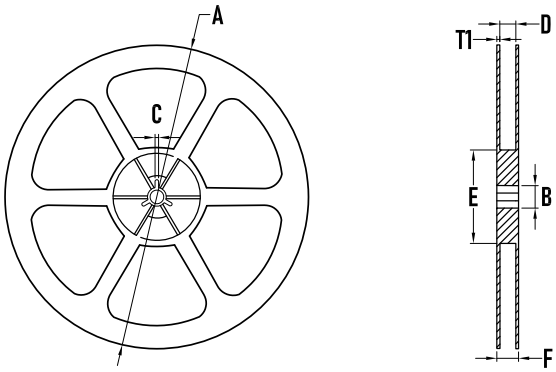
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.95	1.00	–
A1	0.02	0.06	0.10
A2	–	0.60	–
D	2.85	2.90	2.95
b	0.37	0.40	0.43
E	2.35	2.40	2.45
E1	1.25	1.30	1.35
e	1.85	1.90	1.95
L	0.35	0.40	0.48
θ	0	–	6°

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

Revision: 2022-Jan-1-A

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