

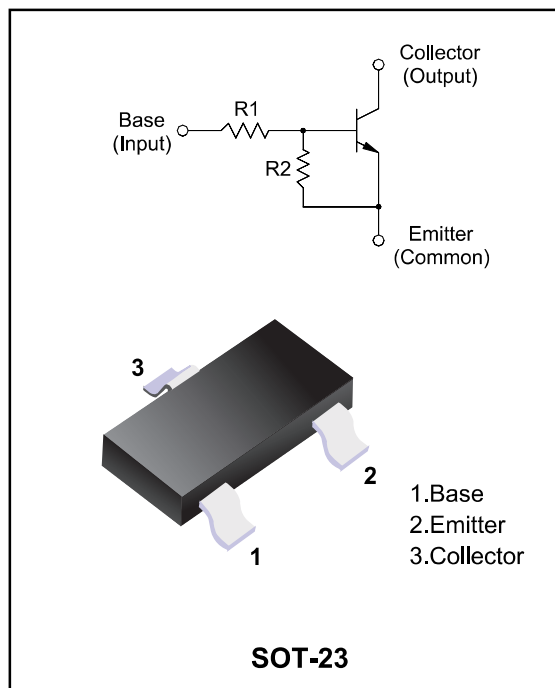
NPN Silicon Epitaxial Planar Transistor

Features

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

Resistor Values

TYPE NO.	R1(k Ω)	R2(k Ω)
KRC107S	10	47
KRC108S	22	47
KRC109S	47	22



Absolute Maximum Ratings Ta= 25℃

CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC107S ~109S	V_o	50	V
Input Voltage	KRC107S	V_i	30, -6	V
	KRC108S		40, -7	
	KRC109S		40, -15	
Output Current	KRC107S ~109S	I_o	100	mA
Power Dissipation		P_D	200	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ 150	℃

Marking

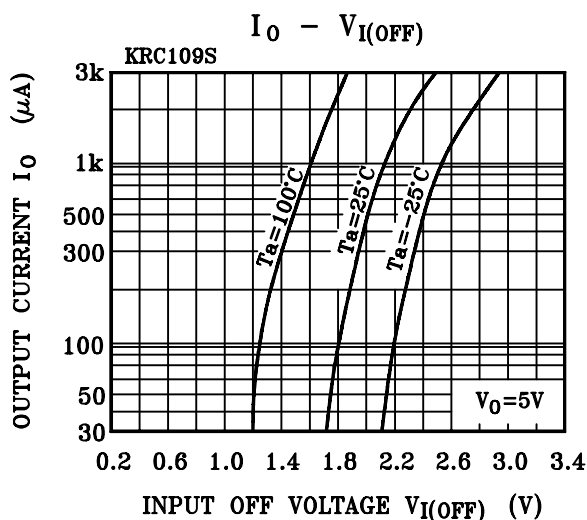
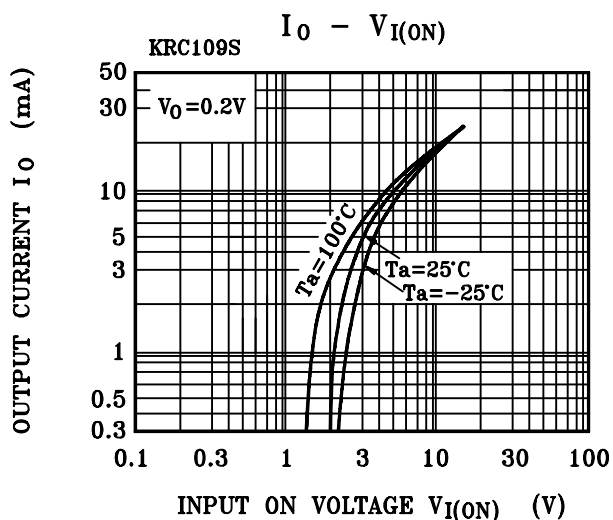
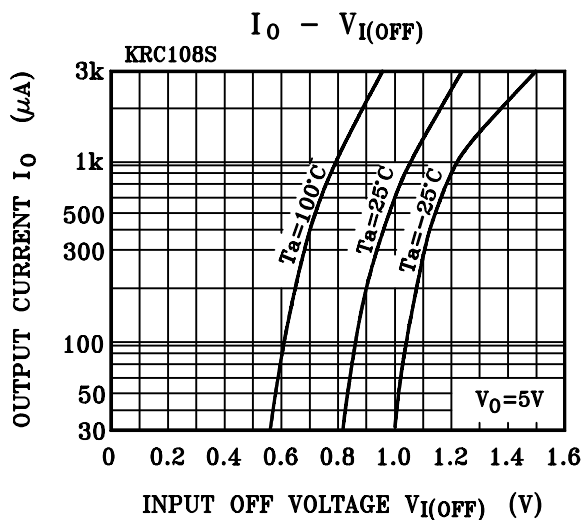
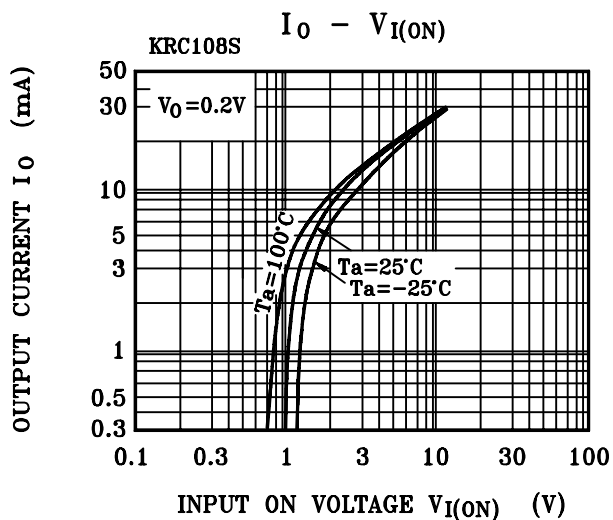
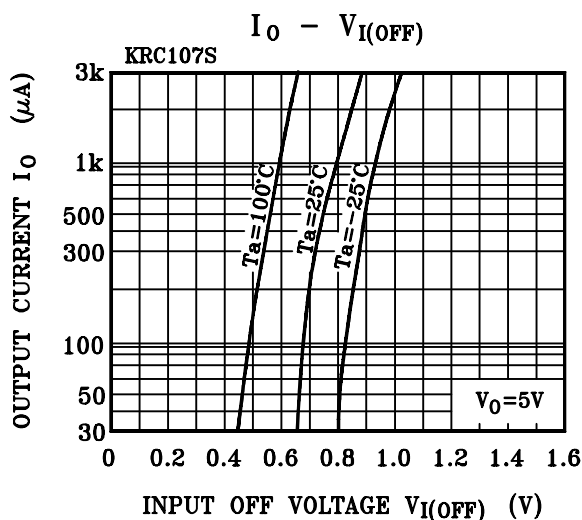
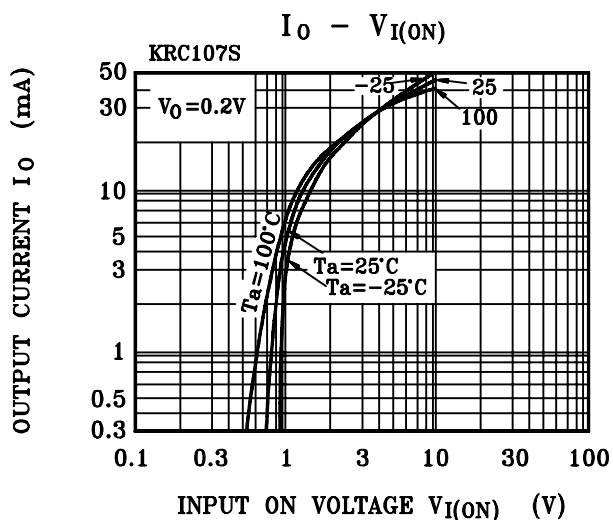
TYPE	KRC107S	KRC108S	KRC109S
MARK	NH	NI	NJ

Electrical Characteristics Ta= 25℃

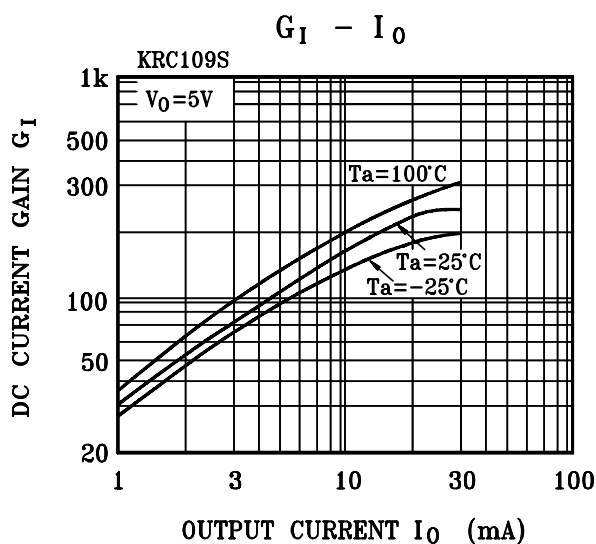
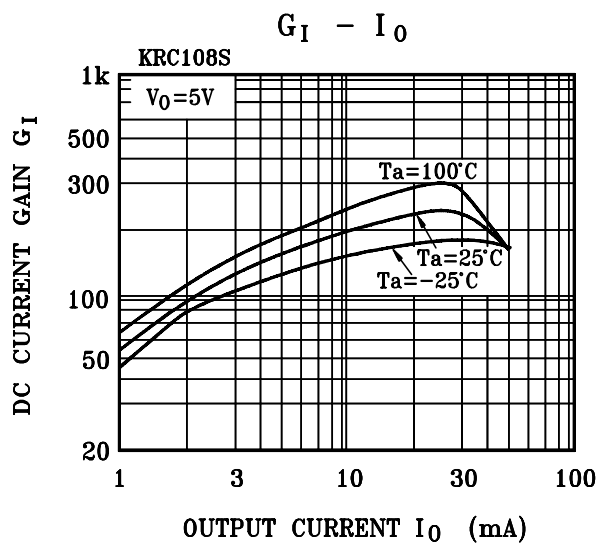
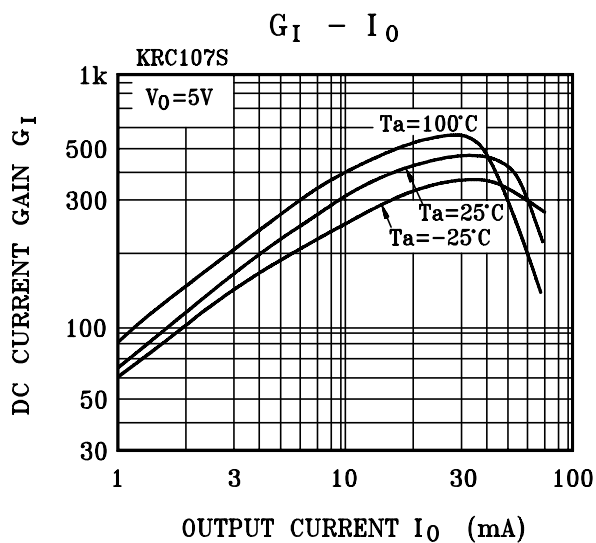
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC107S~109S	$I_{O(OFF)}$	$V_O=50V, V_I=0$	-	-	500	nA
DC Current Gain	KRC107S	G_I	$V_O=5V, I_O=10mA$	80	150	-	
	KRC108S			80	150	-	
	KRC109S			70	140	-	
Output Voltage	KRC107S~109S	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	V
Input Voltage (ON)	KRC107S	$V_{I(ON)}$	$V_O=0.2V, I_O=5mA$	-	1.2	1.8	V
	KRC108S			-	1.8	2.6	
	KRC109S			-	3.0	5.8	
Input Voltage (OFF)	KRC107S	$V_{I(OFF)}$	$V_O=5V, I_O=0.1mA$	0.5	0.75	-	V
	KRC108S			0.6	0.88	-	
	KRC109S			1.5	1.82	-	
Transition Frequency	KRC107S~109S	$f_T *$	$V_O=10V, I_O=5mA$	-	200	-	MHz
Input Current	KRC107S	I_I	$V_I=5V$	-	-	0.88	mA
	KRC108S			-	-	0.36	
	KRC109S			-	-	0.16	
Switching Time	Rise Time	KRC107S	$V_O=5V, V_{IN}=5V$ $R_L=1k\Omega$	-	0.05	-	μS
		KRC108S		-	0.12	-	
		KRC109S		-	0.26	-	
	Storage Time	KRC107S		-	2.0	-	
		KRC108S		-	2.4	-	
		KRC109S		-	1.5	-	
	Fall Time	KRC107S		-	0.36	-	
		KRC108S		-	0.4	-	
		KRC109S		-	0.41	-	

Note : *Characteristic of Transistor Only

Ratings and Characteristic Curves



Ratings and Characteristic Curves



Ordering information

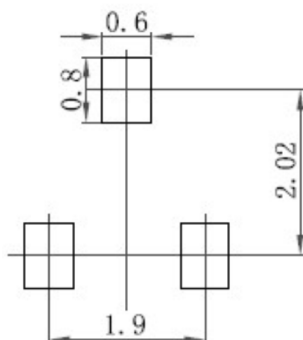
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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