

SEMICONDUCTOR TECHNICAL DATA

KRC107S~KRC109S

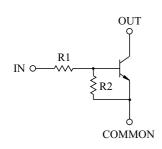
EPITAXIAL PLANAR NPN TRANSISTOR

SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

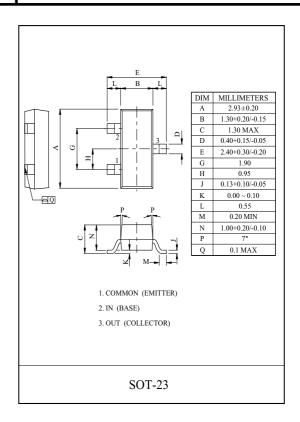
- · With Built-in Bias Resistors.
- · Simplify Circuit Design.
- · Reduce a Quantity of Parts and Manufacturing Process.

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

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

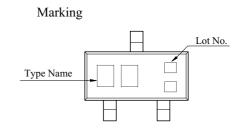


MAXIMUM RATING (Ta=25)

CHARACTERIS	SYMBOL	RATING	UNIT		
Output Voltage	KRC107S 109S	V _O	50	V	
	KRC107S		30, -6	V	
Input Voltage	KRC108S	V_{I}	40, -7		
	KRC109S		40, -15		
Output Current		I _O	100	mA	
Power Dissipation	WDC107G 100G	P_{D}	200	mW	
Junction Temperature	KRC107S 109S	T _j	150		
Storage Temperature Range		T _{stg}	-55 150		

MARK SPEC

TYPE	KRC107S	KRC108S	KRC109S
MARK	NH	NI	NJ



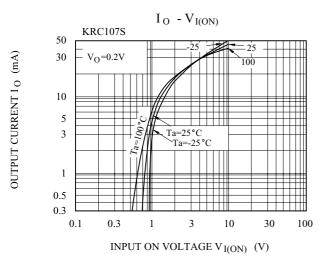
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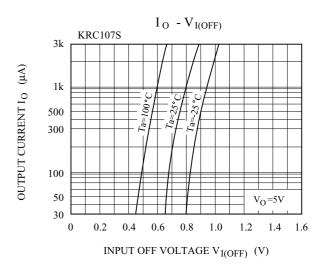
ELECTRICAL CHARACTERISTICS (Ta=25)

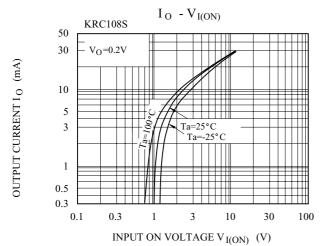
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Output Cut-o	ff Current	KRC107S 109S	I _{O(OFF)}	V _O =50V, V _I =0	-	-	500	nA
DC Current Gain		KRC107S	G_{I}	V _O =5V, I _O =10mA	80	150	-	
		KRC108S			80	150	-	
		KRC109S			70	140	-	
Output Voltag	ge	KRC107S 109S	V _{O(ON)}	I _O =10mA, I _I =0.5mA	-	0.1	0.3	V
		KRC107S			-	1.2	1.8	
Input Voltage (ON)	KRC108S	$V_{I(ON)}$	$V_{O}=0.2V, I_{O}=5mA$	-	1.8	2.6	V	
		KRC109S			-	3.0	5.8	
		KRC107S			0.5	0.75	-	
Input Votlage	(OFF)	KRC108S	$V_{I(OFF)}$	V _O =5V, I _O =0.1mA	0.6	0.88	-	V
		KRC109S			1.5	1.82	-	
Transition Fro	equency	KRC107S 109S	f _T *	V _O =10V, I _O =5mA	-	200	-	MHz
		KRC107S			-	-	0.88	mA
Input Current		KRC108S	${ m I_I}$	V _I =5V	-	-	0.36	
		KRC109S			-	-	0.16	
		KRC107S		$V_0=5V$, $V_{IN}=5V$ $R_L=1k$	-	0.05	-	
	Rise Time	KRC108S	t _r		-	0.12	-	μS
	Time	KRC109S			-	0.26	-	
	Storage Time	KRC107S			-	2.0	-	
Switching Time		KRC108S			-	2.4	-	
Time	Time	KRC109S			-	1.5	-	
		KRC107S	${ m t_f}$		-	0.36	-	
	Fall Time	KRC108S			-	0.4	-	
	1 IIIIC	KRC109S			-	0.41	-	
Input Resistor	KRC107S	R1	-	7	10	13		
	KRC108S			15.4	22	28.6	k	
				KRC109S	32.9	47	61.1	
Resistor Ratio		KRC107S	R2/R1	-	3.7	4.7	5.7	
		KRC108S			1.7	2.1	2.6	
		KRC109S			0.37	0.47	0.57	

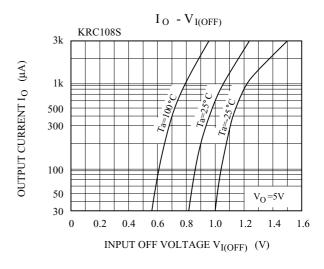
Note: * Characteristic of Transistor Only.

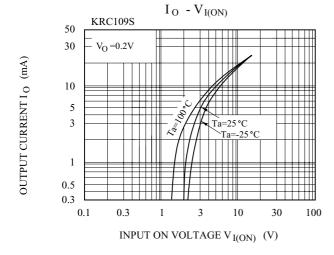
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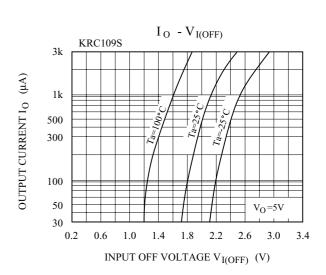




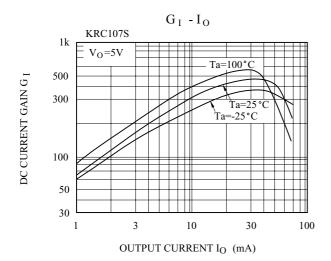


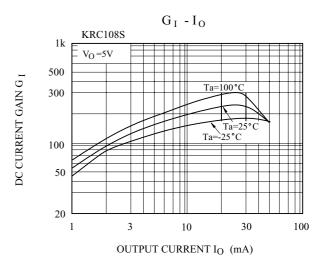






KRC107S~KRC109S





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