

SEMICONDUCTOR TECHNICAL DATA

KRC101S~ KRC106S

EPITAXIAL PLANAR NPN TRANSISTOR

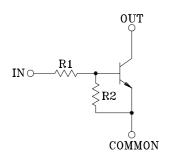
SWITCHING APPLICATION.

INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

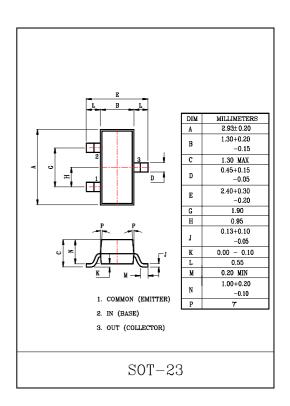
- · With Built-in Bias Resistors.
- · Simplify Circuit Design.
- · Reduce a Quantity of Parts and Manufacturing Process.

EQUIVALENT CIRCUIT



BIAS RESISTOR VALUES

DIAG RESISTOR VALUES							
TYPE NO.	$R1(k\Omega)$	$R2(k\Omega)$					
KRC101S	4.7	4.7					
KRC102S	10	10					
KRC103S	22	22					
KRC104S	47	47					
KRC105S	2.2	47					
KRC106S	4.7	47					



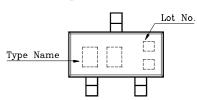
MAXIMUM RATINGS (Ta=25℃)

CHARACTERIST	TIC	SYMBOL	RATING	UNIT
Output Voltage	KRC101S ~106S	Vo	50	V
	KRC101S	VI	20, -10	
	KRC102S		30, -10	
Leout Voltogo	KRC103S		40, -10	V
Input Voltage	KRC104S		40, -10	V
	KRC105S		12, -5	
	KRC106S		20, -5	
Output Current		I_{O}	100	mA
Power Dissipation	KRC101S	P_{D}	200	mW
Junction Temperature	~106S	$T_{\rm j}$	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C

MARK SPEC

_	MARK SIEC										
	TYPE	KRC101S	KRC102S	KRC103S	KRC104S	KRC105S	KRC106S				
	MARK	NA	NB	NC	ND	NE	NF				





ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current KRC101S~106S		$I_{O(OFF)}$	$V_{O}=50V, \ V_{I}=0$	-	-	500	nA
	KRC101S		V _O =5V, I _O =10mA	30	55	-	
	KRC102S	G_{I}		50	80	-	
DC Current Gain	KRC103S			70	120	-	
De current dam	KRC104S		V0-3V, 10-10IIIA	80	200	_	
	KRC105S			80	200	_	
	KRC106S			80	200	-	
Output Voltage	KRC101S~106S	$V_{O(ON)}$	$I_O=10$ mA, $I_I=0.5$ mA	-	0.1	0.3	V
	KRC101S	V _{I(ON)}	V_{O} =0.2 V , I_{O} =5 mA	-	1.5	2.0	V
	KRC102S			-	1.8	2.4	
I (NI)	KRC103S			-	2.1	3.0	
Input Voltage (ON)	KRC104S			-	2.8	5.0	
	KRC105S			-	0.8	1.1	
	KRC106S			-	0.9	1.3	
Least Vetters (OFF)	KRC101S~104S	77	V _O =5V, I _O =0.1mA	1.0	1.2	-	T 7
Input Votlage (OFF)	KRC105S~106S	$V_{\rm I(OFF)}$		0.5	0.65	-	V
Transition Frequency	KRC101S~106S	f _T *	$V_O=10V$, $I_O=5mA$	_	200	-	MHz
Input Current	KRC101S		$ m V_{I}$ =5 $ m V$	-		1.8	
	KRC102S	- I _I		-	-	0.88	mA
	KRC103S			-	-	0.36	
	KRC104S			-	-	0.18	
	KRC105S			-	-	3.6	
	KRC106S			-	-	1.8	

Note: *Characteristic of Transistor Only

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
	Rise	KRC101S	- t _r		-	0.03	-	
		KRC102S			-	0.05	-	
		KRC103S			-	0.12	-	μS
	Time	KRC104S			_	0.22	-	
		KRC105S			_	0.01	_	
		KRC106S			_	0.03	-	
	Storage Time	KRC101S	t _{stg}	$V_{O}\text{=}5V$ $V_{IN}\text{=}5V$ $R_{L}\text{=}1k\Omega$	_	2.0	-	
		KRC102S			_	2.0	-	
Switching		KRC103S			_	2.0	-	
Time		KRC104S			_	2.0	-	
		KRC105S			_	2.0	-	
		KRC106S			_	2.0	-	
	Fall Time	KRC101S	\mathbf{t}_{f}		-	0.12	_	
		KRC102S			-	0.36	-	
		KRC103S			-	0.35	-	
		KRC104S			_	0.6	-	
		KRC105S			=	0.1	-	
		KRC106S			_	0.19	-	

