

KEC

SEMICONDUCTOR
TECHNICAL DATA

KRC641T~KRC646T

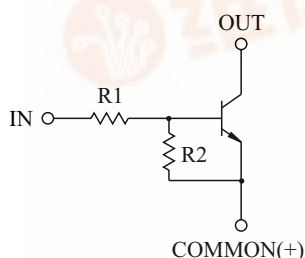
EPITAXIAL PLANAR NPN TRANSISTOR

HIGH CURRENT SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

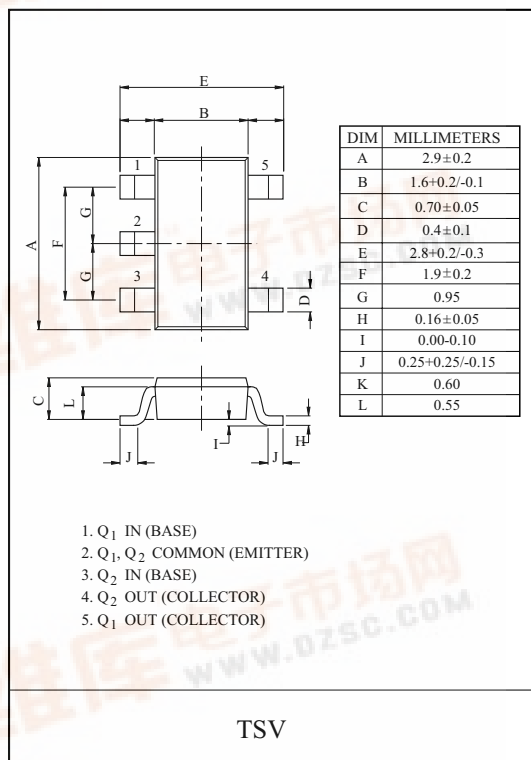
FEATURES

- With Built-in Bias Resistors.
- Simplify Circuit Design.
- Reduce a Quantity of Parts and Manufacturing Process.
- High Output Current : 800mA.

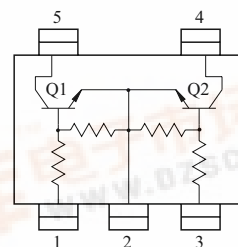
EQUIVALENT CIRCUIT



TYPE NO.	R1 (k Ω)	R2 (k Ω)
KRC641T	1	1
KRC642T	2.2	2.2
KRC643T	4.7	4.7
KRC644T	10	10
KRC645T	1	10
KRC646T	2.2	10



EQUIVALENT CIRCUIT (TOP VIEW)



MAXIMUM RATING (Ta=25℃)

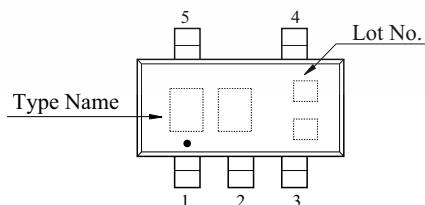
CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Voltage	KRC641T~646T	V _O	50	V
Input Voltage	KRC641T	V _I	10, -10	V
	KRC642T		12, -10	
	KRC643T		20, -10	
	KRC644T		30, -10	
	KRC645T		10, -5	
	KRC646T		12, -6	
Output Current	KRC641T~646T	I _O	800	mA
Power Dissipation		P _D *	0.9	W
Junction Temperature		T _j	150	℃
Storage Temperature Range		T _{stg}	-55 ~ 150	℃

* Package mounted on a ceramic board (600mm²×0.8mm)

Marking

MARK SPEC

TYPE	KRC641T	KRC642T	KRC643T	KRC644T	KRC645T	KRC646T
MARK	NA	NB	NC	ND	NE	NF



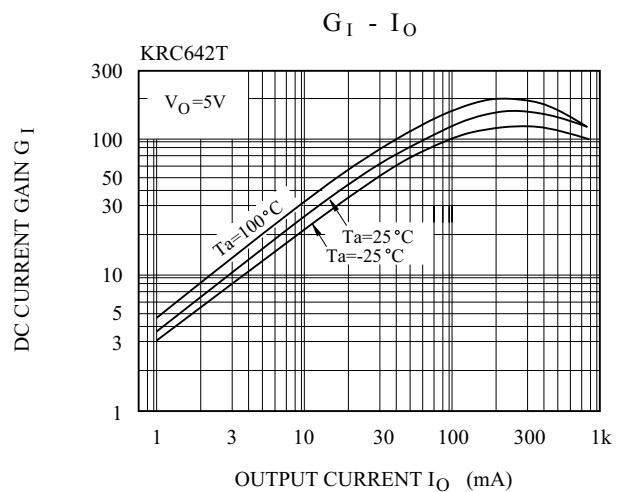
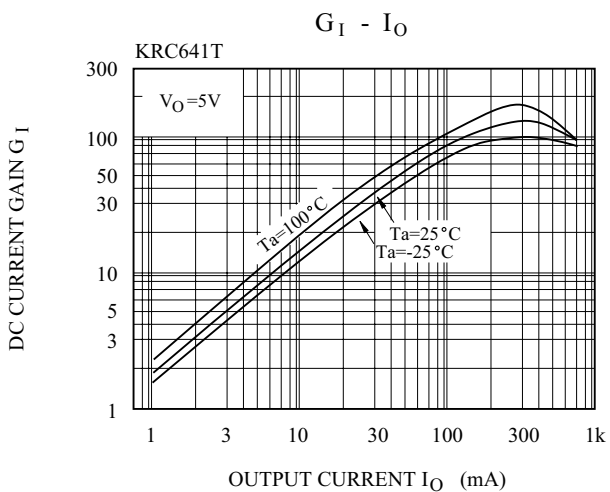
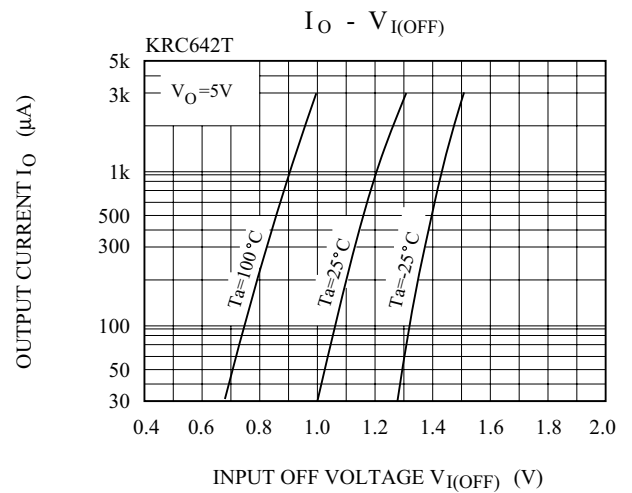
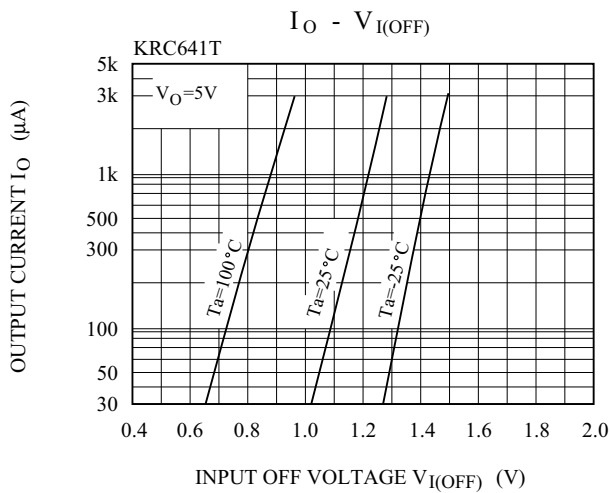
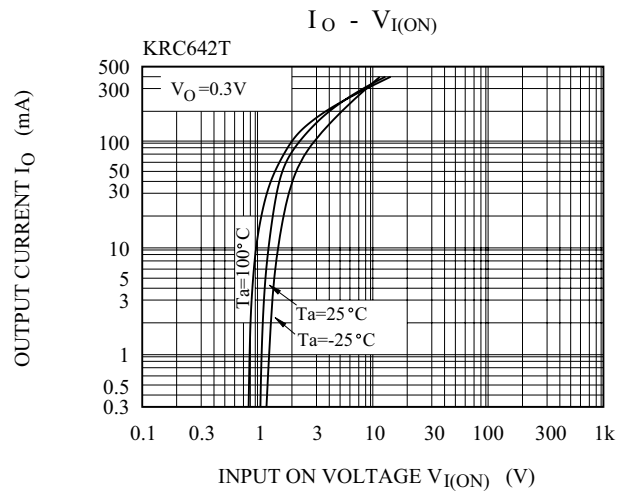
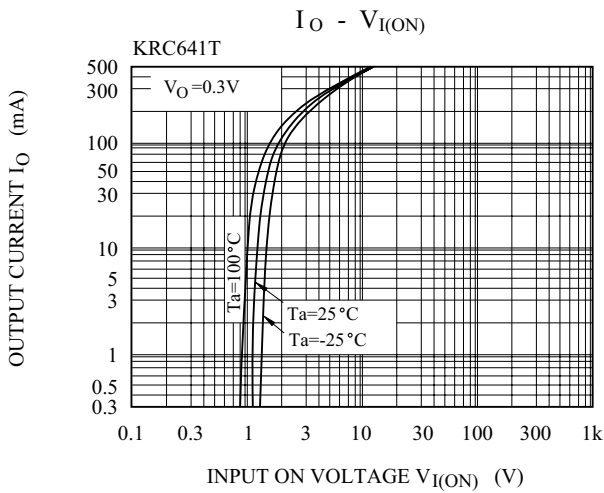
KRC641T~KRC646T

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

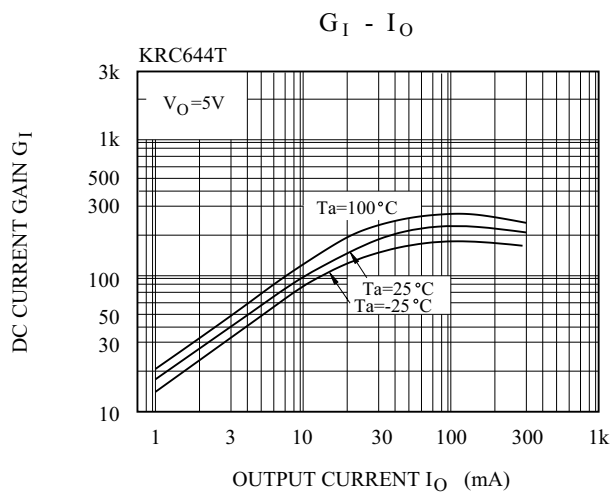
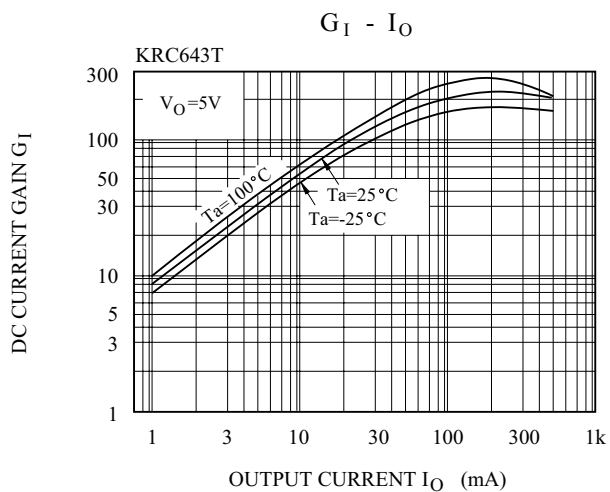
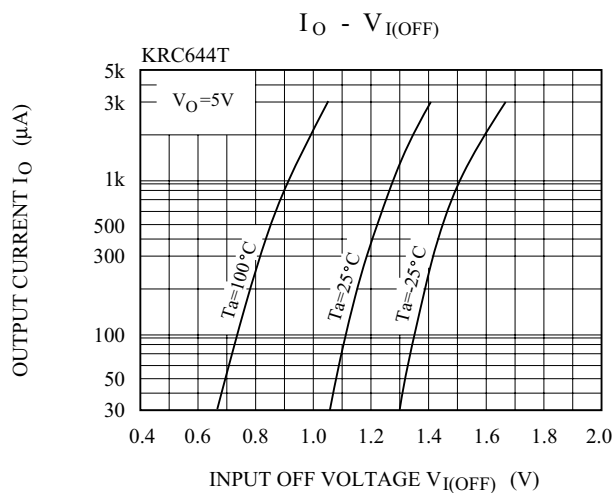
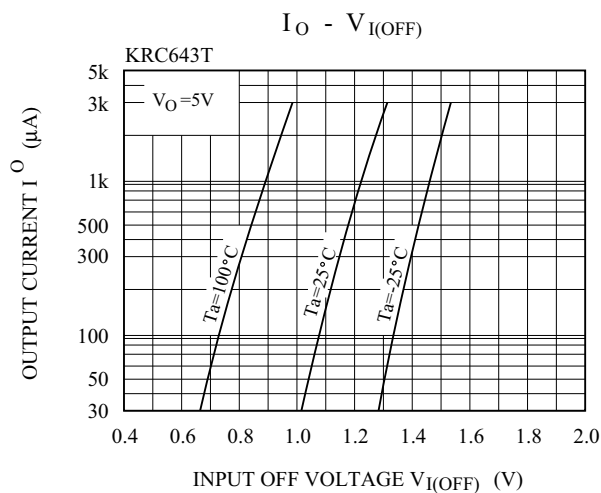
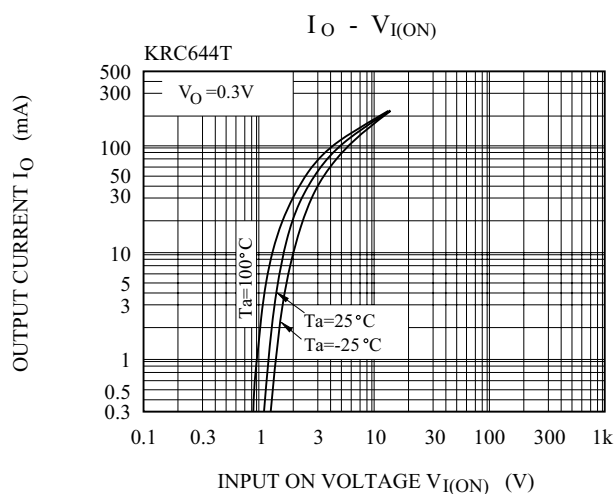
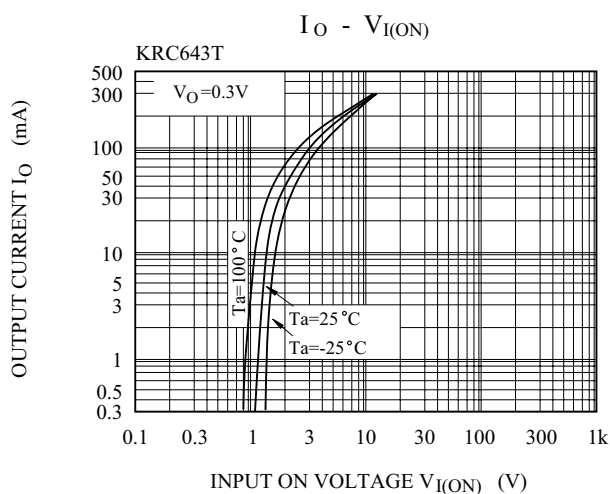
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Cut-off Current	KRC641T~646T	$I_{O(OFF)}$	$V_O=30V, V_I=0$	-	-	10	μA
DC Current Gain	KRC641T	G_I	$V_O=5V, I_O=50mA$	33	-	-	
	KRC642T			39	-	-	
	KRC643T			47	-	-	
	KRC644T			56	-	-	
	KRC645T			56	-	-	
	KRC646T			56	-	-	
Output Voltage	KRC641T~646T	$V_{O(ON)}$	$I_O=50mA, I_I=2.5mA$	-	0.1	0.3	V
Input Voltage (ON)	KRC641T	$V_{I(ON)}$	$V_O=0.3V, I_O=20mA$	-	-	3.0	V
	KRC642T			-	-	3.0	
	KRC643T			-	-	3.0	
	KRC644T			-	-	3.0	
	KRC645T			-	-	3.0	
	KRC646T			-	-	2.0	
Input Voltage (OFF)	KRC641T~644T	$V_{I(OFF)}$	$V_O=5V, I_O=0.1mA$	0.5	-	-	V
	KRC645T~646T			0.3	-	-	
Transition Frequency	KRC641T~646T	f_T^*	$V_O=10V, I_O=5mA, f=100MHz$	-	200	-	MHz
Input Current	KRC641T	I_I	$V_I=5V$	-	-	7.2	mA
	KRC642T			-	-	3.8	
	KRC643T			-	-	1.8	
	KRC644T			-	-	0.88	
	KRC645T			-	-	7.2	
	KRC646T			-	-	3.6	

Note : * Characteristic of Transistor Only.

KRC641T~KRC646T



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