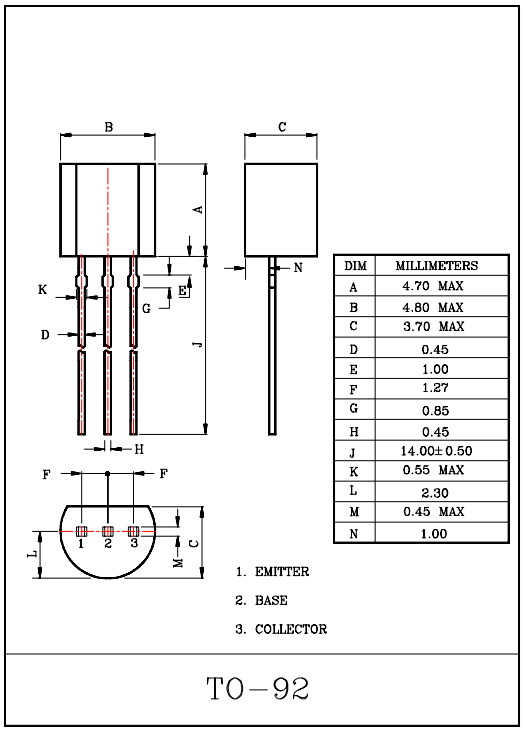
KN4400/4401

EPITAXIAL PLANAR NPN TRANSISTOR

GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

- Complementary to KN4402/4403.



DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.45
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00±0.50
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

TO-92

MAXIMUM RATINGS (Ta=25℃)

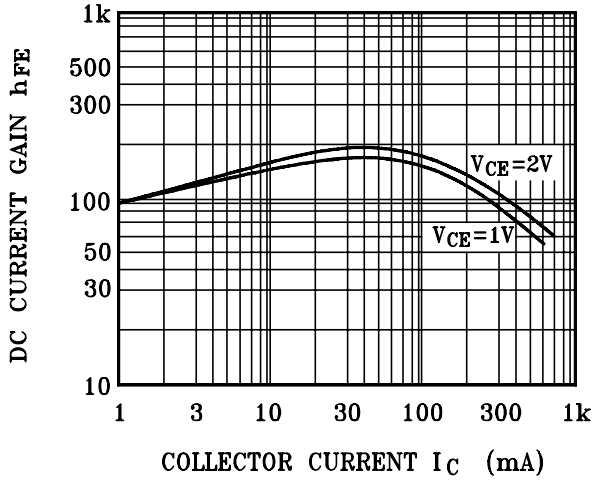
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55~150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

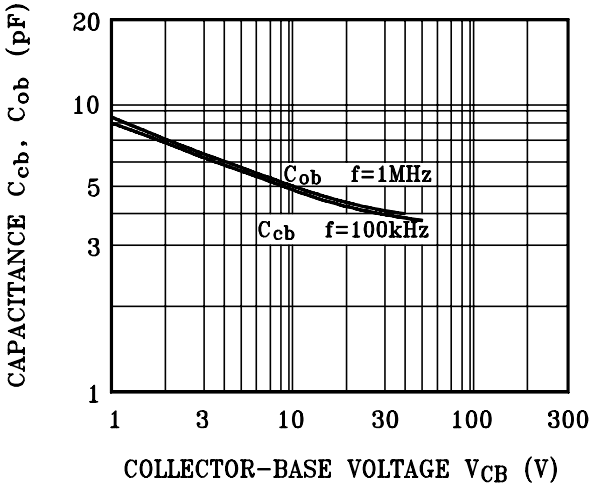
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CEX}	V_{CE}=35V, $V_{EB(OFF)}$=0.4V	-	-	100	nA
Collector Cut-off Current		I_{CBO}	V_{CB}=60V, I_E=0	-	-	100	nA
Emitter Cut-off Current		I_{EBO}	V_{EB}=6V, I_C=0	-	-	100	nA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	I_C=100μA, I_E=0	60	-	-	V
Collector-Emitter Breakdown Voltage *		$V_{(BR)CEO}$	I_E=1mA, I_B=0	40	-	-	V
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=100μA, I_C=0	6	-	-	V
DC Current Gain *	KN4401	h_{FE}(1)	V_{CE}=1V, I_C=0.1mA	20	-	-	
	KN4400	h_{FE}(1)	V_{CE}=1V, I_C=1mA	20	-	-	
	KN4401	h_{FE}(2)		40	-	-	
	KN4400	h_{FE}(2)	V_{CE}=1V, I_C=10mA	40	-	-	
	KN4401	h_{FE}(3)		80	-	-	
	KN4400	h_{FE}(3)	V_{CE}=1V, I_C=150mA	50	-	150	
	KN4401	h_{FE}(4)		100	-	300	
	KN4400	h_{FE}(4)	V_{CE}=2V, I_C=500mA	20	-	-	
	KN4401	h_{FE}(5)		40	-	-	
Collector-Emitter Saturation Voltage *		$V_{CE(sat)}$1	I_C=150mA, V_{CE}=15mA	-	-	0.4	V
		$V_{CE(sat)}$2	I_C=500mA, I_B=50mA	-	-	0.75	
Base-Emitter Saturation Voltage *		$V_{BE(sat)}$1	I_C=150mA, I_B=15mA	0.75	-	0.95	V
		$V_{BE(sat)}$2	I_C=500mA, I_B=50mA	-	-	1.2	
Transition Frequency	KN4400	f_T	I_C=20mA, V_{CE}=10V, f=100MHz	200	-	-	MHz
	KN4401			250	-	-	
Collector Output Capacitance		C_{ob}	V_{CB}=5V, I_E=0, f=1.0MHz	-	-	6.5	pF

Note : *Pulse Test : Pulse Width ≦300μS, Duty Cycle≦2.0%.

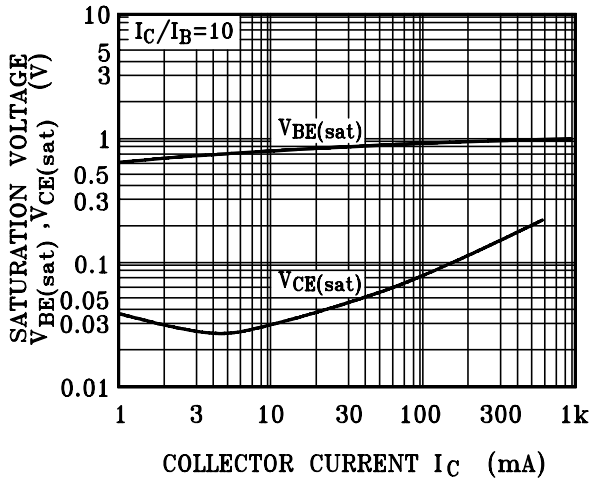
h_{FE} - I_C



C_{cb} , C_{ob} - V_{CB}



$V_{BE(sat)}$,$V_{CE(sat)}$ - I_C



P_C - Ta