

GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

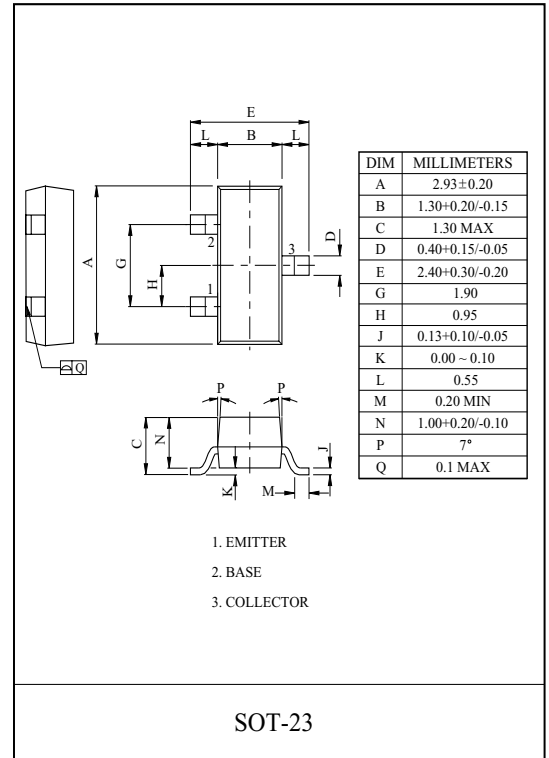
### FEATURES

- Complementary to the KN4402S/4403S

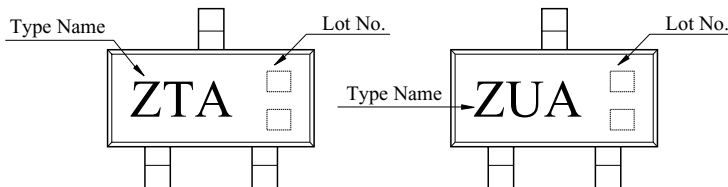
### MAXIMUM RATING (Ta=25 °C)

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	$P_C^*$	350	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

Note : \* Package Mounted On 99.5% Alumina 10 × 8 × 0.6mm)



### Marking



### MARK SPEC

TYPE	MARK
KN4400S	ZTA
KN4401S	ZUA

# KN4400S/4401S

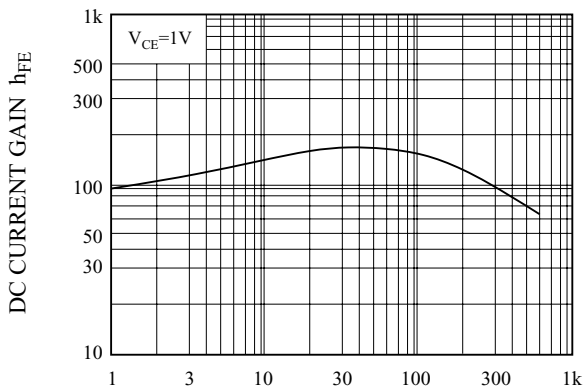
## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current		$I_{CEX}$	$V_{CE}=35V, V_{EB}=0.4V$	-	-	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		$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	60	-	-	V	
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	40	-	-	V	
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	6.0	-	-	V	
DC Current Gain	KN4401S	$h_{FE}(1)$	$V_{CE}=1V, I_C=0.1mA$	20	-	-		
	KN4400S	$h_{FE}(1)$	$V_{CE}=1V, I_C=1mA$	20	-	-		
	KN4401S	$h_{FE}(2)$		40	-	-		
	KN4400S	$h_{FE}(2)$	$V_{CE}=1V, I_C=10mA$	40	-	-		
	KN4401S	$h_{FE}(3)$		80	-	-		
	KN4400S	$h_{FE}(3)$	$V_{CE}=1V, I_C=150mA$	50	-	150		
	KN4401S	$h_{FE}(4)$		100	-	300		
	KN4400S	$h_{FE}(4)$	$V_{CE}=2V, I_C=500mA$	20	-	-		
KN4401S	$h_{FE}(5)$	40		-	-			
Collector-Emitter Saturation Voltage		*	$V_{CE(sat)1}$	$I_C=150mA, I_B=15mA$	-	-	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	KN4400S	$f_T$	$V_{CE}=10V, I_C=20mA, f=100MHz$	200	-	-	MHz	
	KN4401S			250	-	-		
Collector Output Capacitance		$C_{ob}$	$V_{CB}=5V, I_E=0, f=1MHz$	-	-	6.5	pF	

\* Pulse Test : Pulse Width 300  $\mu s$ , Duty Cycle 2%.

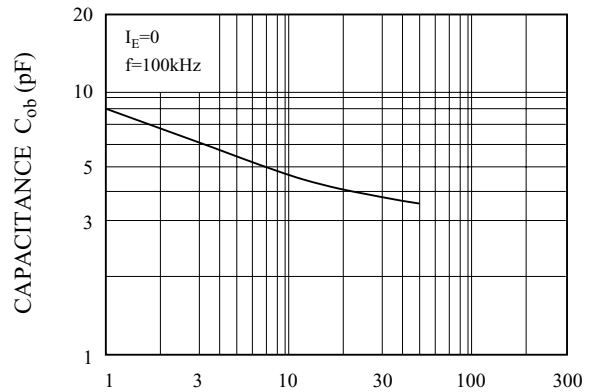
# KN4400S/4401S

$h_{FE} - I_C$



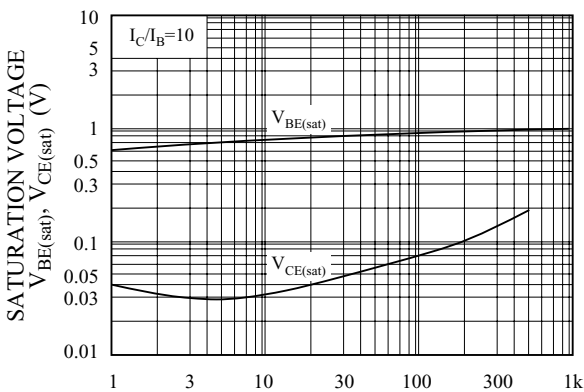
COLLECTOR CURRENT  $I_C$  (mA)

$C_{ob} - V_{CB}$



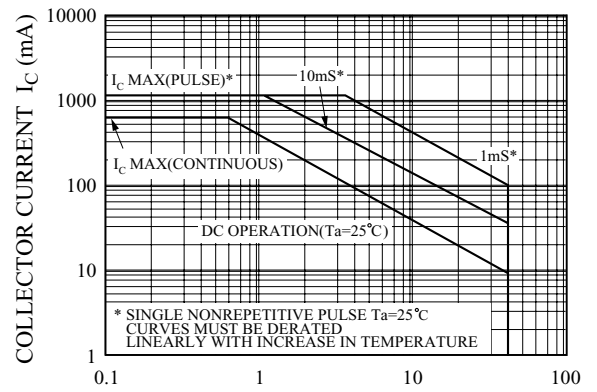
COLLECTOR-BASE VOLTAGE  $V_{CB}$  (V)

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



COLLECTOR CURRENT  $I_C$  (mA)

SAFE OPERATING AREA



COLLECTOR-EMITTER  $V_{CE}$  (V)