

GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

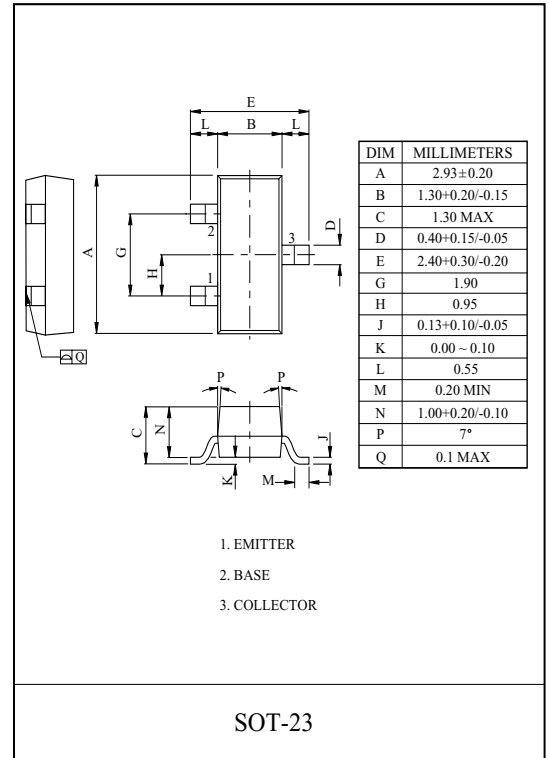
#### FEATURES

- Complementary to the KN4400S/4401S

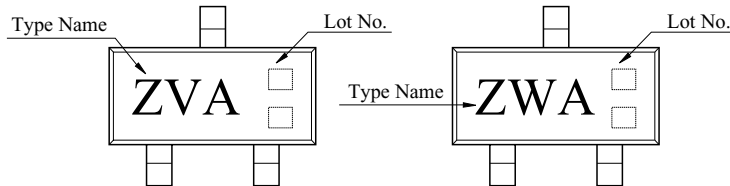
#### MAXIMUM RATING (Ta=25 )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-40	V
Collector-Emitter Voltage	$V_{CEO}$	-40	V
Emitter-Base Voltage	$V_{EBO}$	-5	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
KN4402S	ZVA
KN4403S	ZWA

# KN4402S/4403S

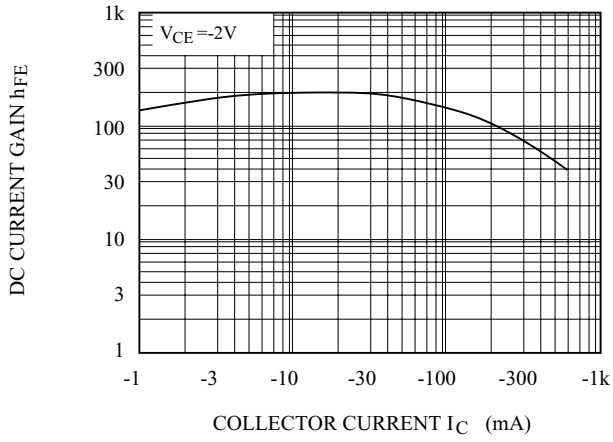
## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

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		$I_{CBO}$	$V_{CB}=-40V, I_E=0$	-	-	-100	nA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-40	-	-	V
Collector-Emitter Breakdown Voltage *		$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-40	-	-	V
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	-5	-	-	V
DC Current Gain *	KN4403S	$h_{FE(1)}$	$V_{CE}=-1V, I_C=-0.1mA$	30	-	-	
	KN4402S	$h_{FE(1)}$	$V_{CE}=-1V, I_C=-1mA$	30	-	-	
	KN4403S	$h_{FE(2)}$		60	-	-	
	KN4402S	$h_{FE(2)}$	$V_{CE}=-1V, I_C=-10mA$	50	-	-	
	KN4403S	$h_{FE(3)}$		100	-	-	
	KN4402S	$h_{FE(3)}$	$V_{CE}=-2V, I_C=-150mA$	50	-	150	
	KN4403S	$h_{FE(4)}$		100	-	300	
	KN4402S	$h_{FE(4)}$	$V_{CE}=-2V, I_C=-500mA$	20	-	-	
KN4403S	$h_{FE(5)}$	20		-	-		
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
		$V_{BE(sat)2}$	$I_C=-500mA, I_B=-50mA$	-	-	-1.3	
Transition Frequency		$f_T$	$V_{CE}=-10V, I_C=-20mA, f=100MHz$	200	-	-	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB}=-10V, I_E=0, f=1MHz$	-	-	8.5	pF

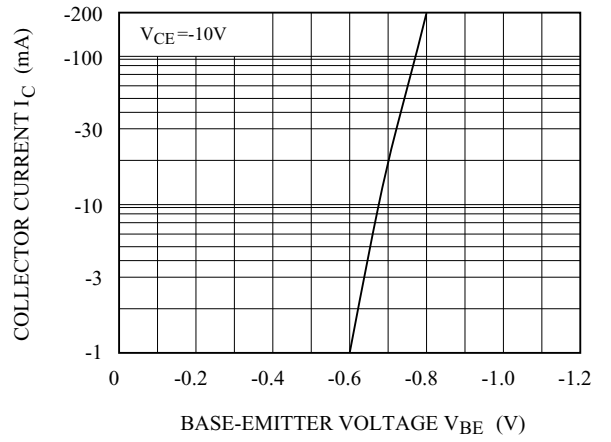
\* Pulse Test : Pulse Width 300  $\mu$ s, Duty Cycle 2%.

# KN4402S/4403S

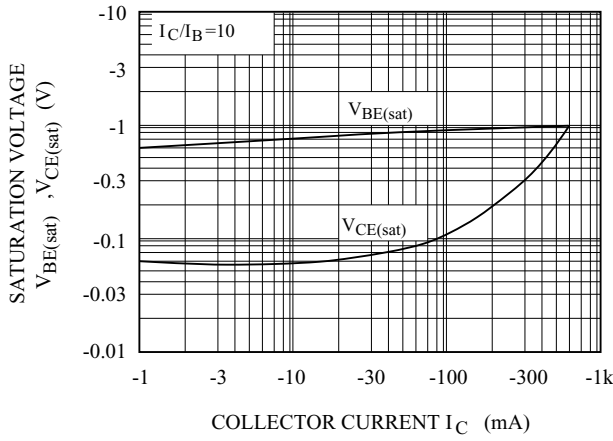
$h_{FE} - I_C$



$I_C - V_{BE}$



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



$C_{cb} - V_{CB}$

