

# KSP44/45

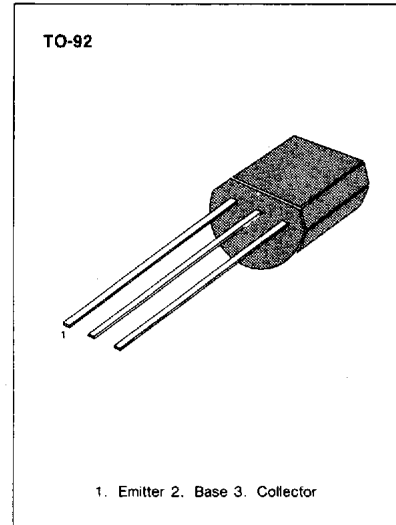
# NPN EXITAXIAL SILICON TRANSISTOR

## HIGH VOLTAGE TRANSISTOR

- Collector-Emitter Voltage:  $V_{CE0}$  = KSP44: 400V  
KSP45: 350V
- Collector Dissipation:  $P_c(\max)$  = 625mW

## ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit	
Collector-Base Voltage	$V_{CBO}$	KSP44	500	V
		KSP45	400	V
Collector-Emitter Voltage	$V_{CEO}$	KSP44	400	V
		KSP45	350	V
Emitter-Base Voltage	$V_{EBO}$	6	V	
Collector Current	$I_C$	300	mA	
Collector Dissipation ( $T_a = 25^\circ\text{C}$ )	$P_C$	625	mW	
Collector Dissipation ( $T_C = 25^\circ\text{C}$ )	$P_C$	1.5	W	
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Storage Temperature	$T_{stg}$	-55~150	$^\circ\text{C}$	



## ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100\mu\text{A}, I_B = 0$	KSP44	500	V
			KSP45	400	V
*Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1\text{mA}, I_B = 0$	KSP44	400	V
			KSP45	350	V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	6		V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 400\text{V}, I_E = 0$ $V_{CB} = 320\text{V}, I_E = 0$		0.1	$\mu\text{A}$
			KSP44	0.1	$\mu\text{A}$
Collector Cut-off Current	$I_{CES}$	$V_{CE} = 400\text{V}, I_B = 0$ $V_{CE} = 320\text{V}, I_B = 0$		0.5	$\mu\text{A}$
			KSP44	0.5	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$		0.1	$\mu\text{A}$
			KSP45	0.1	$\mu\text{A}$
*DC Current Gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$ $V_{CE} = 10\text{V}, I_C = 10\text{mA}$ $V_{CE} = 10\text{V}, I_C = 50\text{mA}$ $V_{CE} = 10\text{V}, I_C = 100\text{mA}$	40		
			50	200	
			45		
			40		
*Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C = 1\text{mA}, I_B = 0.1\text{mA}$ $I_C = 10\text{mA}, I_B = 1\text{mA}$ $I_C = 50\text{mA}, I_B = 5\text{mA}$		0.4	V
				0.5	V
				0.75	V
*Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		0.75	V
				0.75	V
Output Capacitance	$C_{ob}$	$V_{CB} = 20\text{V}, I_E = 0$ $f = 1\text{MHz}$		7	pF

\* Pulse Test :  $PW \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$



ELECTRONICS

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