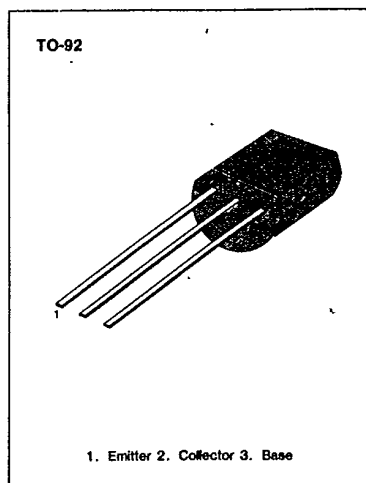


**KSC2001****NPN SILICON TRANSISTOR**

T-29-21

**GENERAL PURPOSE APPLICATIONS**  
**HIGH TOTAL POWER DISSIPATION**  
**(PT=600 mW)**
High  $h_{FE}$  and LOW  $V_{CE(sat)}$ **ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	700	mA
Base Current	$I_B$	150	mA
Collector Dissipation	$P_C$	600	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~150	$^\circ\text{C}$



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

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
* Base Emitter Voltage	$V_{BE}$	$V_{CE}=6V, I_C=10mA$	600	640	700	mV
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=30V, I_E=0$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			100	nA
* DC Current Gain	$h_{FE1}$	$V_{CE}=1V, I_C=100mA$	90	200	400	
	$h_{FE2}$	$V_{CE}=1V, I_C=700mA$	50	140		
* Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=700mA, I_B=70mA$		0.2	0.6	V
* Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=700mA, I_B=70mA$		0.95	1.2	V
Output Capacitance	$C_{ob}$	$V_{CB}=6V, I_E=0, f=1MHz$		13	25	pF
Current Gain Bandwidth Product	$f_T$	$V_{CE}=6V, I_E=10mA$	50	170		MHz

\* Pulse test: PW  $\leq$  350  $\mu\text{s}$ , duty cycle  $\leq$  2% Pulsed **$h_{FE1}$  CLASSIFICATION**

Classification	R	O	Y
$h_{FE1}$	90-180	135-270	200-400

