

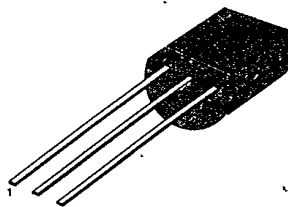
KSC2001**NPN SILICON TRANSISTOR**

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	$^\circ\text{C}$

TO-18



1. Emitter 2. Collector 3. Base

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

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

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

