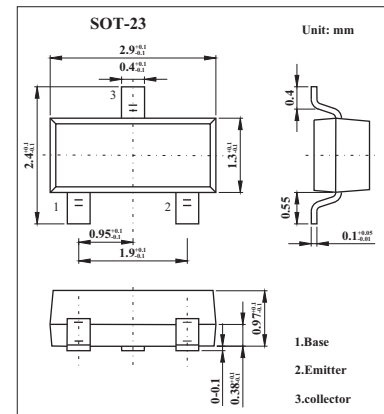
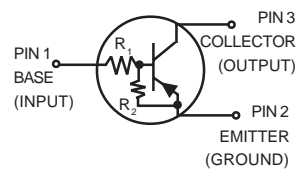


## PNP Silicon Bias Resistor Transistor

### KMUN2114

#### ■ Features

- Simplifies Circuit Design
- Reduces Board Space
- Reduces Component Count



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Collector Current -Continuous	$I_C$	0.1	A
Collector Power dissipation	$P_C$	0.24	W
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	508	$^\circ\text{C}/\text{W}$
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10 \mu\text{A}$ , $I_E = 0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 2\text{mA}$ , $I_B = 0$	50			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 50\text{V}$ , $I_E = 0$			0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE} = 50\text{V}$ , $I_B = 0$			0.5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 6\text{V}$ , $I_C = 0$			0.2	mA
DC current gain	$h_{FE}$	$V_{CE} = 10\text{V}$ , $I_C = 5.0\text{mA}$	80	140		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}$ , $I_B = 0.3\text{mA}$			0.25	V
Output Voltage (on)	$V_{OL}$	$V_{CC} = 5.0\text{V}$ , $V_B = 2.5\text{V}$ , $R_L = 1.0\text{k}\Omega$			0.2	V
Output Voltage (off)	$V_{OH}$	$V_{CC} = 5.0\text{V}$ , $V_B = 0.5\text{V}$ , $R_L = 1.0\text{k}\Omega$	4.9			V
Input Resistor	$R_1$		7.0	10	13	$\text{k}\Omega$
Resistor Ratio	$R_1/R_2$		0.17	0.21	0.25	

#### ■ Marking

Marking	A6D
---------	-----

# KMUN2114

## Typical Characteristics

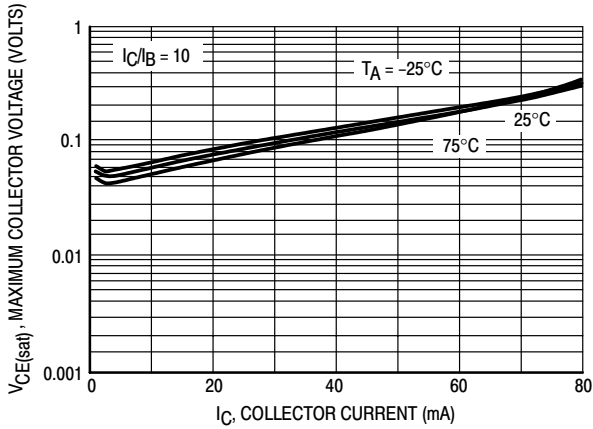


Figure 17.  $V_{CE(sat)}$  versus  $I_C$

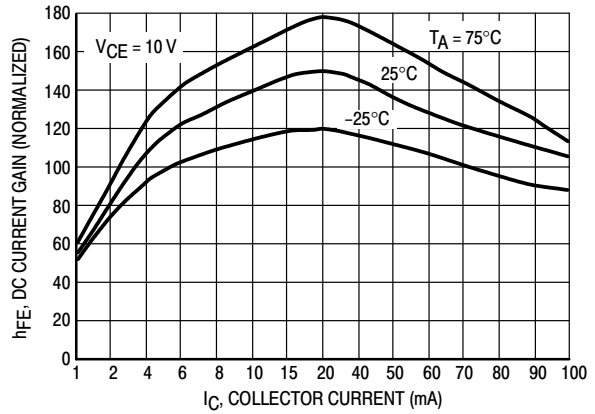


Figure 18. DC Current Gain

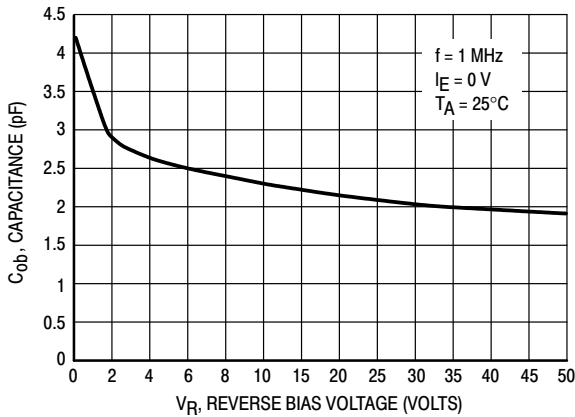


Figure 19. Output Capacitance

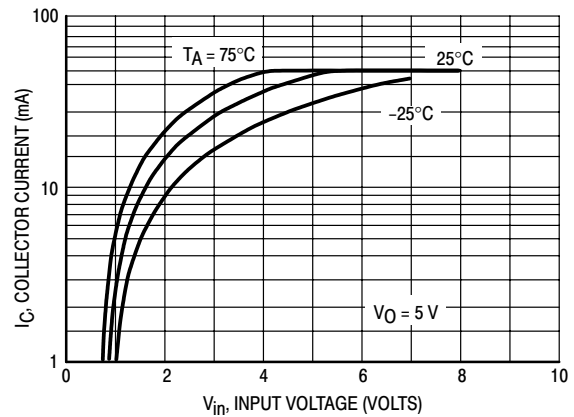


Figure 20. Output Current versus Input Voltage

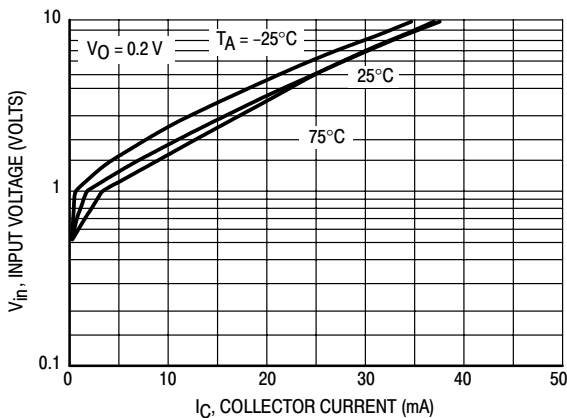


Figure 21. Input Voltage versus Output Current

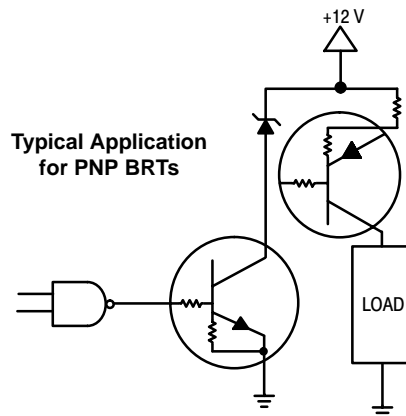


Figure 22. Inexpensive, Unregulated Current Source