# XP01114 (XP1114)

## Silicon PNP epitaxial planer transistor

#### For switching/digital circuits

#### Features

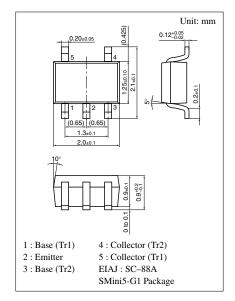
- Two elements incorporated into one package. (Emitter-coupled transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half.

### Basic Part Number of Element

• UNR1114(UN1114)  $\times$  2 elements

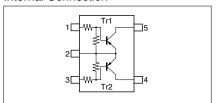
### Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Ratings	Unit	
Rating of element	Collector to base voltage	$V_{CBO}$	-50	V	
	Collector to emitter voltage	$V_{CEO}$	-50	V	
	Collector current	$I_{C}$	-100	mA	
Overall	Total power dissipation	$P_{T}$	150	mW	
	Junction temperature	$T_{j}$	150	°C	
	Storage temperature	$T_{stg}$	-55 to +150	°C	



## Marking Symbol: 7Q

#### Internal Connection

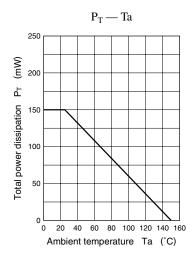


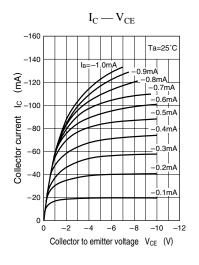
#### Electrical Characteristics (Ta=25°C)

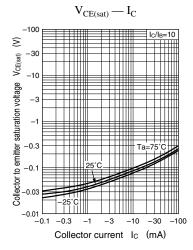
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V <sub>CBO</sub>	$I_C = -10\mu A, I_E = 0$	-50			V
Collector to emitter voltage	V <sub>CEO</sub>	$I_{C} = -2mA, I_{B} = 0$	-50			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = -50V, I_E = 0$			- 0.1	μA
Conector cuton current	$I_{CEO}$	$V_{CE} = -50V, I_B = 0$			- 0.5	μΑ
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -6V, I_C = 0$			-0.2	mA
Forward current transfer ratio	h <sub>FE</sub>	$V_{CE} = -10V, I_{C} = -5mA$	80			
Forward current transfer h <sub>FE</sub> ratio	h <sub>FE</sub> (small/large)*1	$V_{CE} = -10V, I_{C} = -5mA$	0.5	0.99		
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = -10 \text{mA}, I_B = -0.3 \text{mA}$			- 0.25	V
Output voltage high level	V <sub>OH</sub>	$V_{CC} = -5V, V_B = -0.5V, R_L = 1k\Omega$	-4.9			V
Output voltage low level	V <sub>OL</sub>	$V_{CC} = -5V, V_B = -2.5V, R_L = 1k\Omega$			- 0.2	V
Transition frequency	$f_T$	$V_{CB} = -10V$ , $I_E = 1mA$ , $f = 200MHz$		80		MHz
Input resistance	R <sub>1</sub>		-30%	10	+30%	kΩ
Resistance ratio	R <sub>1</sub> /R <sub>2</sub>		0.17	0.21	0.25	

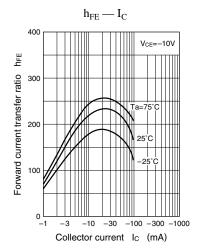
<sup>\*1</sup> Ratio between 2 elements

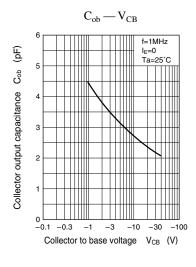
Note) The Part number in the Parenthesis shows conventional part number.

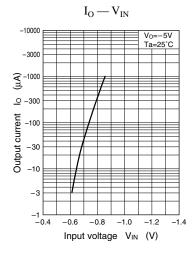


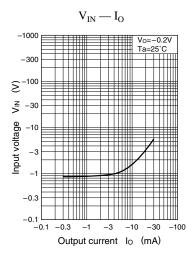












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