# XP01215 (XP1215)

## Silicon NPN epitaxial planer transistor

### For switching/digital circuits

#### Features

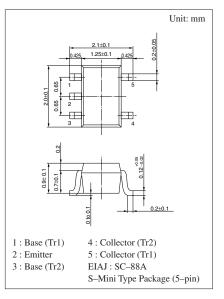
- Two elements incorporated into one package. (Emitter-coupled transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half.

### Basic Part Number of Element

• UNR1215(UN1215)  $\times$  2 elements

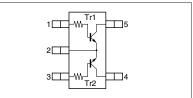
Parameter		Symbol	Ratings	Unit
Rating of element	Collector to base voltage	V <sub>CBO</sub>	50	V
	Collector to emitter voltage	V <sub>CEO</sub>	50	V
	Collector current	I <sub>C</sub>	100	mA
Overall	Total power dissipation	P <sub>T</sub>	150	mW
	Junction temperature	Tj	150	°C
	Storage temperature	T <sub>stg</sub>	-55 to +150	°C

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



#### Marking Symbol: 9M

#### Internal Connection

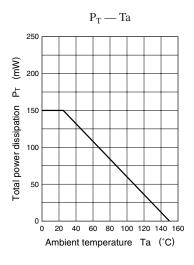


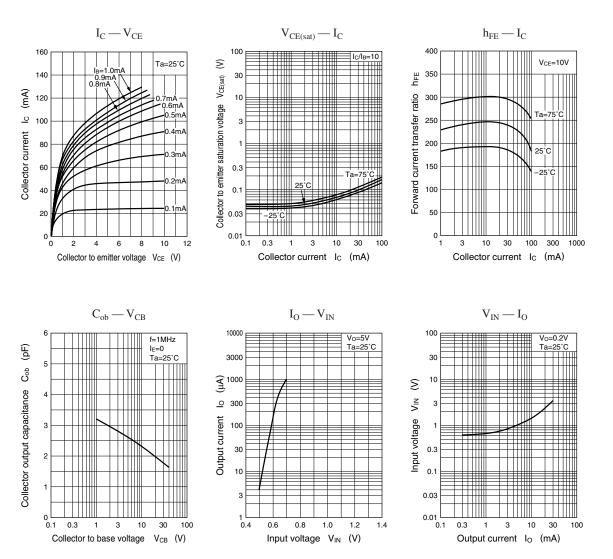
#### Parameter Symbol Conditions min Unit typ max V Collector to base voltage V<sub>CBO</sub> $I_{C} = 10 \mu A, I_{E} = 0$ 50 V Collector to emitter voltage V<sub>CEO</sub> $I_{C} = 2mA, I_{B} = 0$ 50 $V_{CB} = 50V, I_E = 0$ 0.1 μΑ $I_{CBO}$ Collector cutoff current $V_{CE} = 50V, I_B = 0$ 0.5 μΑ I<sub>CEO</sub> $V_{EB} = 6V, I_C = 0$ Emitter cutoff current I<sub>EBO</sub> 0.01 mA $V_{CE} = 10V, I_C = 5mA$ Forward current transfer ratio 160 460 h<sub>FE</sub> $V_{CE} = 10V, I_C = 5mA$ 0.5 0.99 Forward current transfer $h_{\text{FE}}$ ratio hFE (small/large)\* Collector to emitter saturation voltage V<sub>CE(sat)</sub> $I_{C} = 10mA, I_{B} = 0.3mA$ 0.25 V $V_{CC} = 5V, V_B = 0.5V, R_L = 1k\Omega$ V Output voltage high level V<sub>OH</sub> 4.9 $V_{CC}$ = 5V, $V_B$ = 2.5V, $R_L$ = 1k $\Omega$ V Output voltage low level VOL 0.2 $V_{CB} = 10V, I_E = -2mA, f = 200MHz$ 150 Transition frequency $f_{T} \\$ MHz -30% Input resistance $R_1$ 10 +30% kΩ

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

\* Ratio between 2 elements

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





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