# XP04215 (XP4215)

## Silicon NPN epitaxial planer transistor

## For switching/digital circuits

### Features

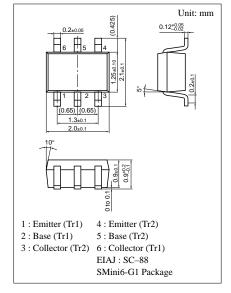
- Two elements incorporated into one package. (Transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half.

#### Basic Part Number of Element

• UNR1215(UN1215) × 2 elements

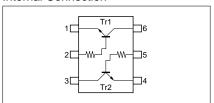
## Absolute Maximum Ratings (Ta=25°C)

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: 8T

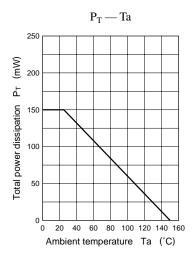
#### Internal Connection

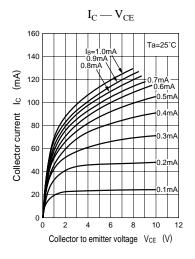


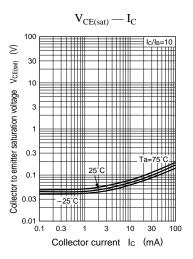
#### Electrical Characteristics (Ta=25°C)

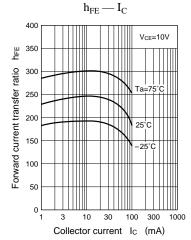
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V <sub>CBO</sub>	$I_{\rm C} = 10 \mu {\rm A}, I_{\rm E} = 0$	50			V
Collector to emitter voltage	V <sub>CEO</sub>	$I_C = 2mA, I_B = 0$	50			V
C-11tt-ff	$I_{CBO}$	$V_{CB} = 50V, I_E = 0$			0.1	μА
Collector cutoff current	I <sub>CEO</sub>	$V_{CE} = 50V, I_B = 0$			0.5	μА
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 6V, I_C = 0$			0.01	mA
Forward current transfer ratio	h <sub>FE</sub>	$V_{CE} = 10V, I_C = 5mA$	160		460	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{\rm C} = 10 {\rm mA}, I_{\rm B} = 0.3 {\rm mA}$		0.09	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	$f_T$	$V_{CB} = 10V, I_E = -2mA, f = 200MHz$		150		MHz
Input resistance	R <sub>1</sub>		-30%	10	+30%	kΩ

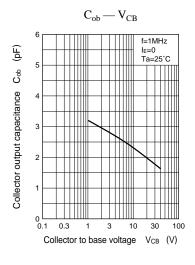
Note) The Part number in the Parenthesis shows conventional part number.

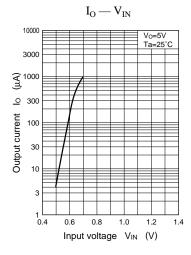


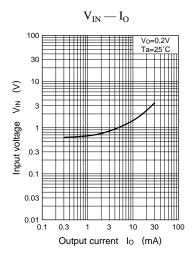












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