

XP04213 (XP4213)

Silicon NPN epitaxial planer transistor

For switching/digital circuits

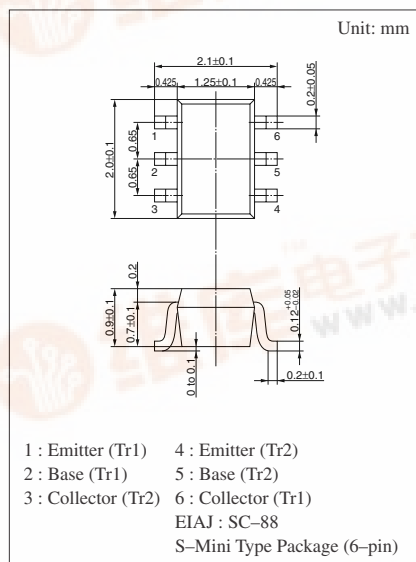
Features

- 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

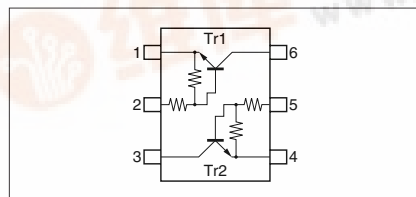
- UNR1213(UN1213) × 2 elements

Parameter	Symbol	Ratings	Unit
Absolute Maximum Ratings (Ta=25°C)			
Collector to emitter voltage	V _{CEO}	50	V
Collector current	I _C	100	mA
Total power dissipation	P _T	150	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C



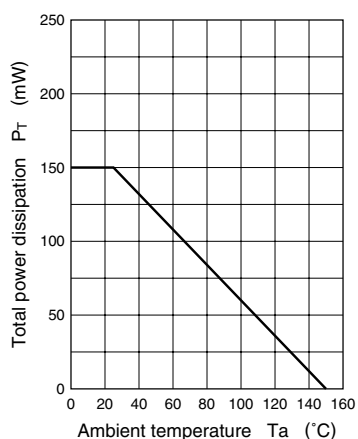
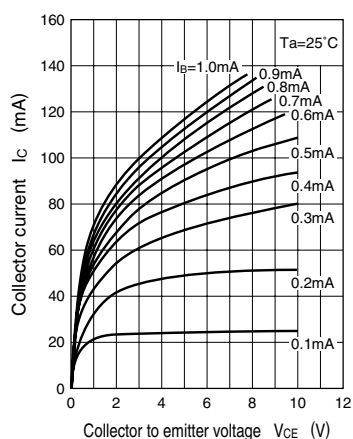
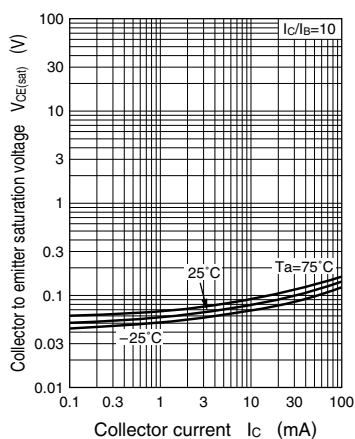
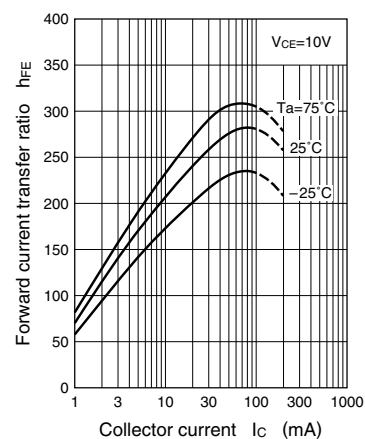
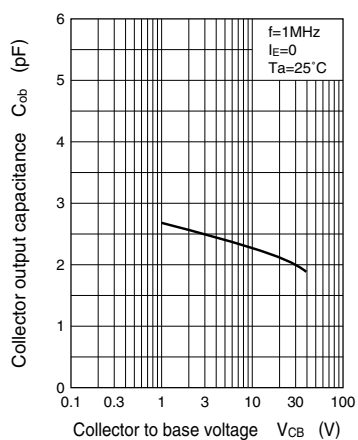
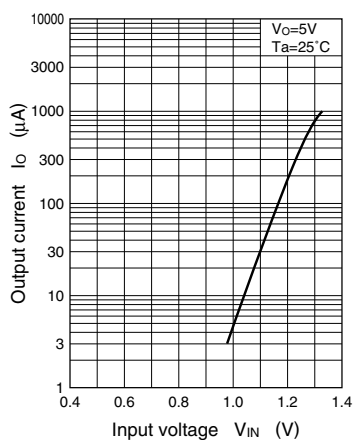
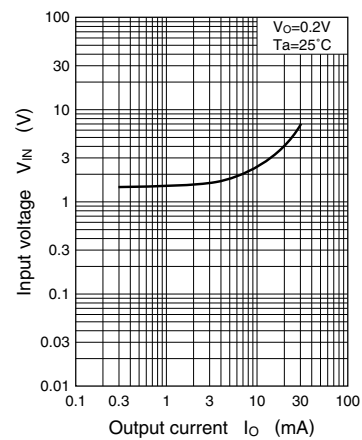
Marking Symbol: 8S

Internal Connection



Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V _{CBO}	I _C = 10μA, I _E = 0	50			V
Collector to emitter voltage	V _{CEO}	I _C = 2mA, I _B = 0	50			V
Collector cutoff current	I _{CBO}	V _{CB} = 50V, I _E = 0			0.1	μA
	I _{CEO}	V _{CE} = 50V, I _B = 0			0.5	μA
Emitter cutoff current	I _{EBO}	V _{EB} = 6V, I _C = 0			0.1	mA
Forward current transfer ratio	h _{FE}	V _{CE} = 10V, I _C = 5mA	80			
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 10mA, I _B = 0.3mA			0.25	V
Output voltage high level	V _{OH}	V _{CC} = 5V, V _B = 0.5V, R _L = 1kΩ	4.9			V
Output voltage low level	V _{OL}	V _{CC} = 5V, V _B = 3.5V, R _L = 1kΩ			0.2	V
Transition frequency	f _T	V _{CB} = 10V, I _E = -2mA, f = 200MHz		150		MHz
Input resistance	R ₁		-30%	47	+30%	kΩ
Resistance ratio	R ₁ /R ₂		0.8	1.0	1.2	

$P_T - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $C_{ob} - V_{CB}$  $I_O - V_{IN}$  $V_{IN} - I_O$ 

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