XP04211 (XP4211)

Silicon NPN epitaxial planar type

For switching/digital circuits

■ Features

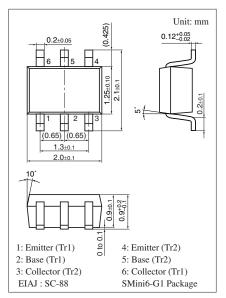
- Two elements incorporated into one package (Transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number

• UNR2211 (UN2211) × 2

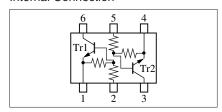
■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V _{CBO}	50	V	
Collector-emitter voltage (Base open)	V _{CEO}	50	V	
Collector current	I_C	100	mA	
Total power dissipation	P _T	150	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T_{stg}	-55 to +150	°C	



Marking Symbol: 9V

Internal Connection

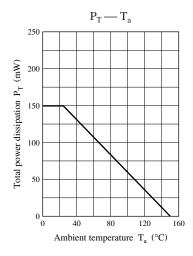


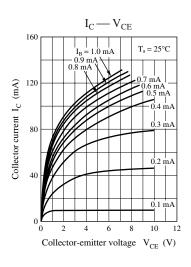
■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

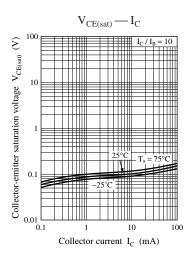
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	50			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = 2 \text{ mA}, I_B = 0$	50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 50 \text{ V}, I_{E} = 0$			0.1	μΑ
Collector-emitter cutoff current (Base open)	I _{CEO}	$V_{CE} = 50 \text{ V}, I_{B} = 0$			0.5	μΑ
Emitter-base cutoff current (Collector open)	I _{EBO}	$V_{EB} = 6 \text{ V}, I_C = 0$			0.5	mA
Forward current transfer ratio	h_{FE}	$V_{CE} = 10 \text{ V}, I_{C} = 5 \text{ mA}$	35			_
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = 10 \text{ mA}, I_B = 0.3 \text{ mA}$			0.25	V
Output voltage high-level	V _{OH}	$V_{CC} = 5 \text{ V}, V_B = 0.5 \text{ V}, R_L = 1 \text{ k}\Omega$	4.9			V
Output voltage low-level	V _{OL}	$V_{CC} = 5 \text{ V}, V_B = 2.5 \text{ V}, R_L = 1 \text{ k}\Omega$			0.2	V
Input resistance	R_1		-30%	10	+30%	kΩ
Resistance ratio	R ₁ / R ₂		0.8	1.0	1.2	_
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_E = -2 \text{ mA}, f = 200 \text{ MHz}$		150		MHz

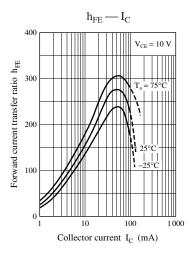
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

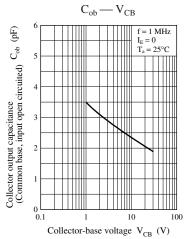
Note) The part number in the parenthesis shows conventional part number.

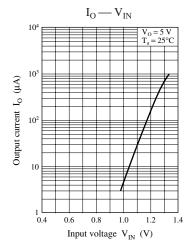


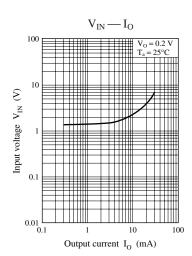












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