

UNR3113, UNR311A, UNR311T

Silicon PNP epitaxial planar transistor

For digital circuits

■ Features

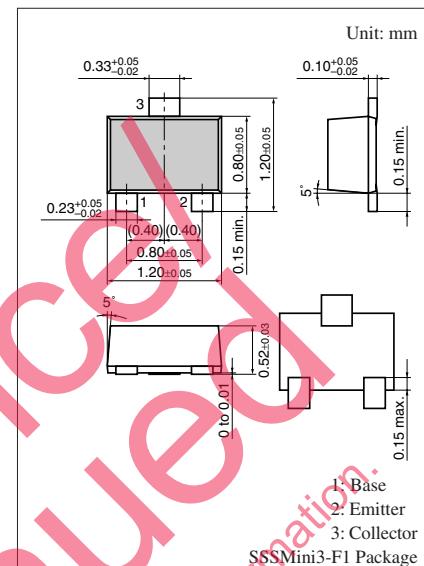
- Optimum for downsizing of the equipment and high-density mounting
- Contribute for low power consumption

■ Resistance by Part Number

	Marking symbol	(R ₁)	(R ₂)
• UNR3113	6C	47 kΩ	47 kΩ
• UNR311A	6X	100 kΩ	100 kΩ
• UNR311T	EY	22 kΩ	47 kΩ

■ Absolute Maximum Ratings T_a = 25°C

Parameter	Symbol	Rating	Unit
Collector to base voltage	V _{CBO}	-50	V
Collector to emitter voltage	V _{CEO}	-50	V
Collector current	I _C	-100	mA
Total power dissipation	P _T	100	mW
Junction temperature	T _j	125	°C
Storage temperature	T _{stg}	-55 to +125	°C

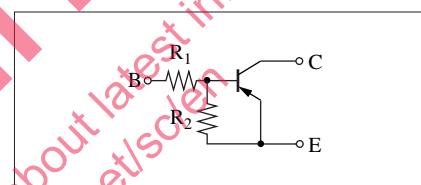


SSSSmini3-F1 Package

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	V _{CBO}	I _C = -10 μA, I _E = 0	-50			V
Collector to emitter voltage	V _{CEO}	I _C = -2 mA, I _B = 0	-50			V
Collector cutoff current	I _{CBO}	V _{CB} = -50 V, I _E = 0			-0.1	μA
	I _{CEO}	V _{CE} = -50 V, I _B = 0			-0.5	
Emitter cutoff current	I _{EBO}	V _{EB} = -6 V, I _C = 0			-0.1	mA
					-0.2	
Forward current transfer ratio	h _{FE}	V _{CE} = -10 V, I _C = -5 mA	80			
			80		400	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = -10 mA, I _B = -0.3 mA			-0.25	V
High-level output voltage	V _{OH}	V _{CC} = -5 V, V _B = -0.5 V, R _L = 1 kΩ	-4.9			V
Low-level output voltage	V _{OL}	V _{CC} = -5 V, V _B = -3.5 V, R _L = 1 kΩ			-0.2	V
		V _{CC} = -5 V, V _B = -5.0 V, R _L = 1 kΩ				
		V _{CC} = -5 V, V _B = -2.5 V, R _L = 1 kΩ				

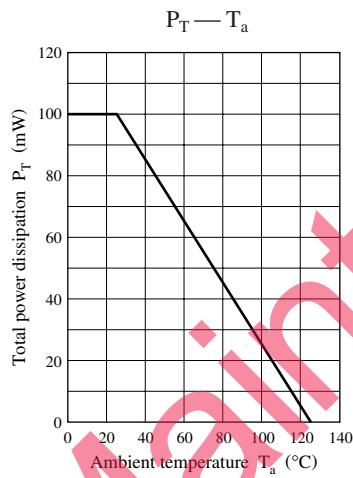
Internal Connection



■ Electrical Characteristics (continued) $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input resistance	R ₁		-30%	47	+30%	kΩ
				100		
				22		
Resistance ratio	R ₁ / R ₂		0.8	1.0	1.2	
				1.0		
				0.37	0.47	0.57
Gain bandwidth product	f _T	V _{CB} = -10 V, I _E = 1 mA, f = 200 MHz		80		MHz

Common characteristics chart



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