UP0411MG

Silicon PNP epitaxial planar type

For 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
- UNR211M × 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	125	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	–55 to +125	°C

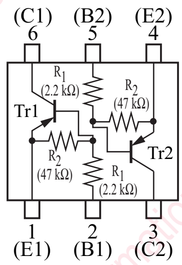
■ Package
- Code

  SSMini6-F2
- Pin Name

1: Emitter (Tr1)	4: Emitter (Tr2)
2: Base (Tr1)	5: Base (Tr2)
3: Collector (Tr2)	6: Collector (Tr1)

■ Marking Symbol:EA

■ Internal Connection



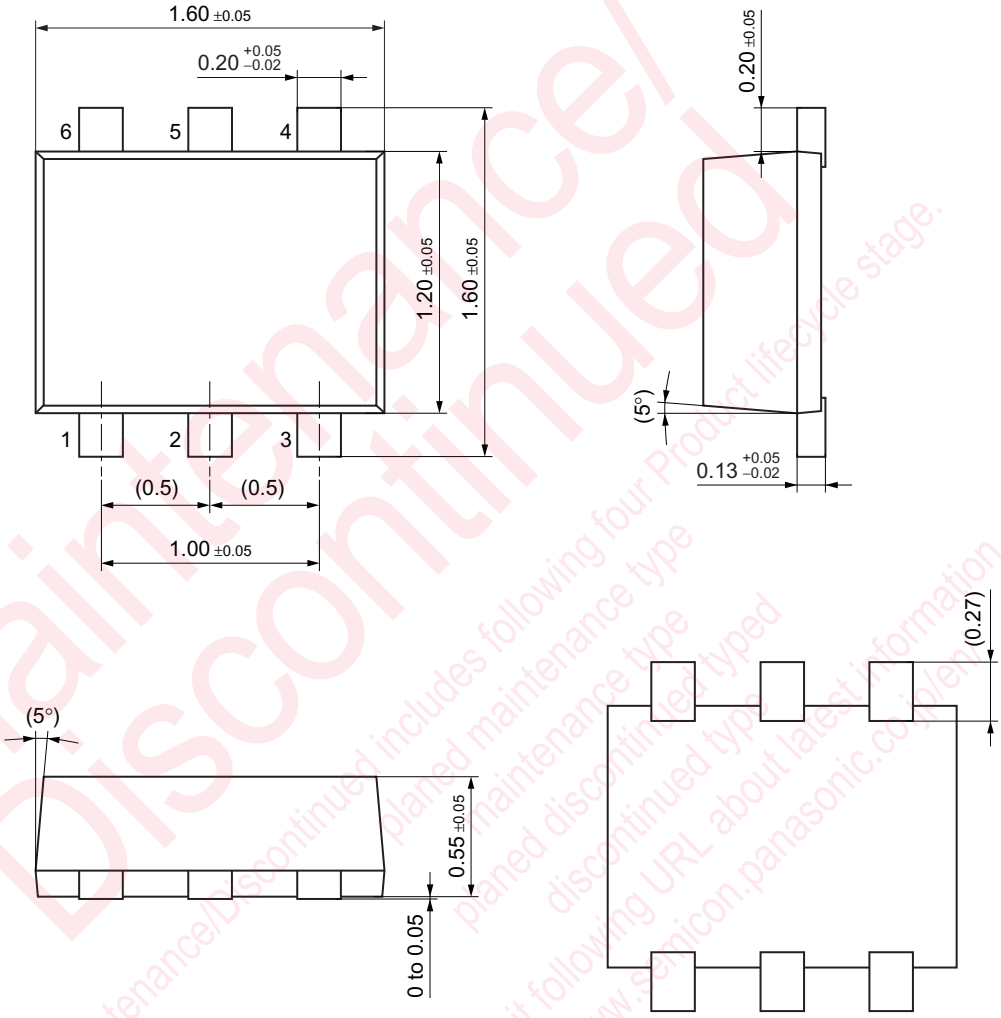
■ Electrical Characteristics $T_a = 25°C±3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = –10\ \mu A, I_E = 0$	–50			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = –2\ mA, I_B = 0$	–50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = –50\ V, I_E = 0$			– 0.1	µA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = –50\ V, I_B = 0$			– 0.5	µA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = –6\ V, I_C = 0$			– 0.2	mA
Forward current transfer ratio	h_{FE}	$V_{CE} = –10\ V, I_C = –5\ mA$	80			—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = –10\ mA, I_B = – 0.3\ mA$			– 0.25	V
Output voltage high-level	V_{OH}	$V_{CC} = –5\ V, V_B = – 0.5\ V, R_L = 1\ k\Omega$	–4.9			V
Output voltage low-level	V_{OL}	$V_{CC} = –5\ V, V_B = –2.5\ V, R_L = 1\ k\Omega$			– 0.2	V
Input resistance	R_1		–30%	2.2	+30%	kΩ
Resistance ratio	R_1 / R_2			0.047		—
Transition frequency	f_T	$V_{CB} = –10\ V, I_E = 1\ mA, f = 200\ MHz$		80		MHz

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

SSMini6-F2

Unit: mm



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