

# UNR2226 (UN2226)

## Silicon NPN epitaxial planer type

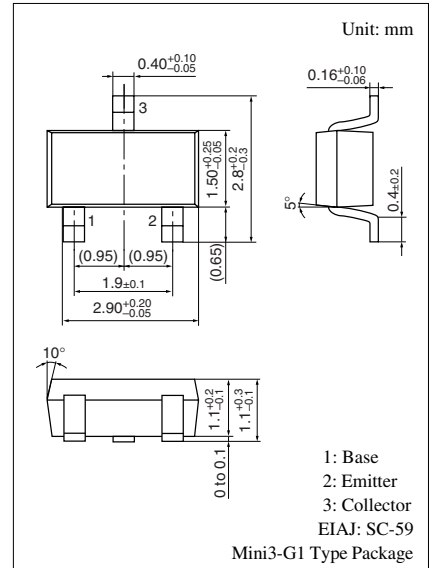
For muting circuit

### ■ Features

- Low collector to emitter saturation voltage  $V_{CE(sat)}$
- Built-in resistor, allowing reduction of the number of parts.

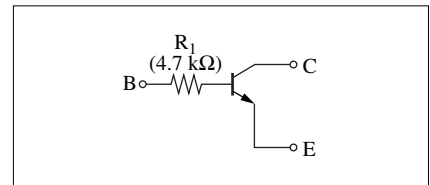
### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	30	V
Collector to emitter voltage	$V_{CEO}$	20	V
Emitter to base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	600	mA
Total power dissipation	$P_T$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



Marking Symbol: FY

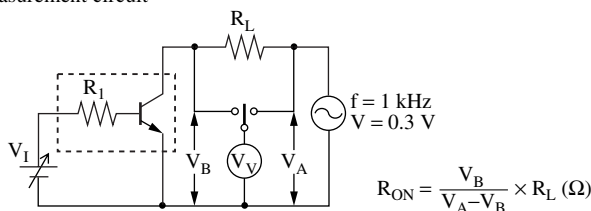
Internal Connection



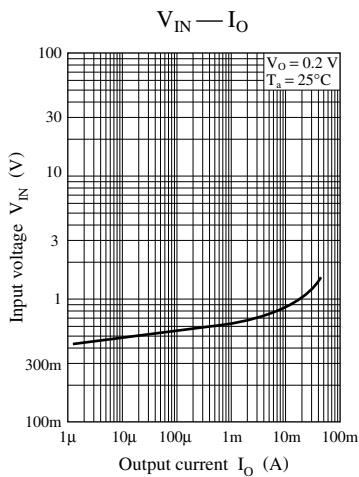
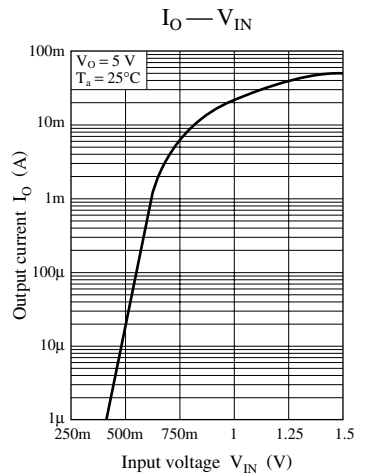
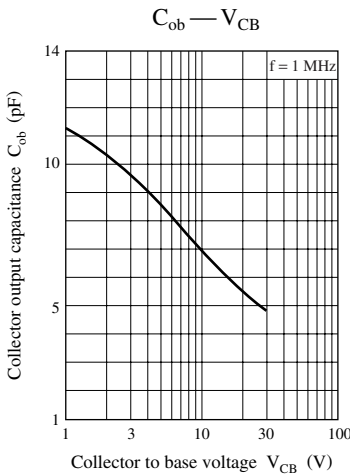
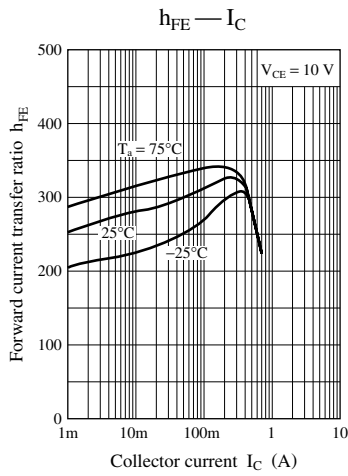
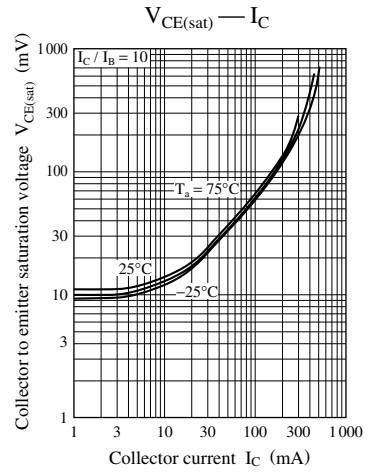
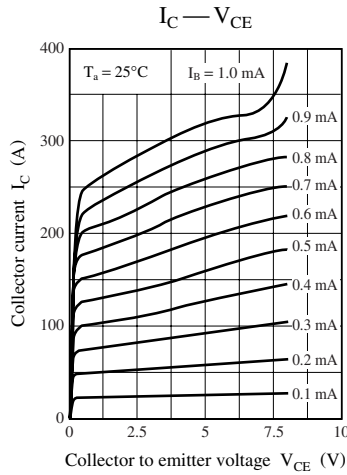
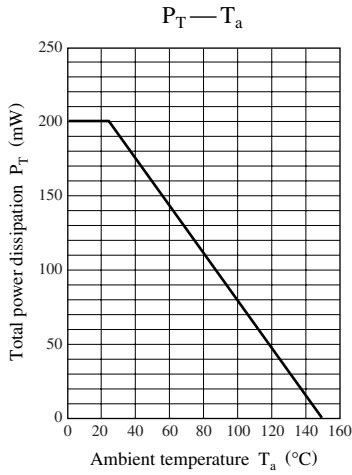
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	$V_{CBO}$	$I_C = 1 \mu\text{A}, I_E = 0$	30			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	20			V
Emitter to base voltage	$V_{EBO}$	$I_E = 1 \mu\text{A}, I_C = 0$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 30 \text{ V}, I_E = 0$			1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5 \text{ V}, I_C = 0$			1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 5 \text{ V}, I_C = 50 \text{ mA}$	100		600	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50 \text{ mA}, I_B = 2.5 \text{ mA}$			80	mV
Input resistance	$R_1$		-30%	4.7	+30%	k $\Omega$
ON-resistance *	$R_{ON}$	$V_I = 7 \text{ V}, R_L = 1 \text{ k}\Omega, f = 1 \text{ kHz}$		0.95		$\Omega$
Transition frequency	$f_T$	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz

Note) \*:  $R_{ON}$  measurement circuit



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



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