

UNR5225

Silicon NPN epitaxial planer type

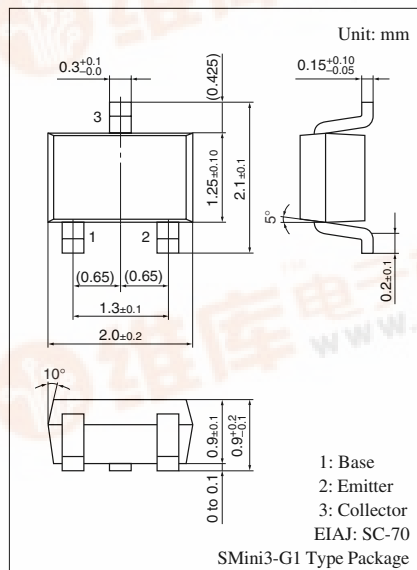
For muting circuit

■ Features

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

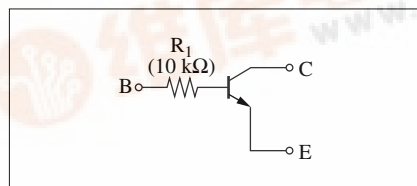
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: FZ

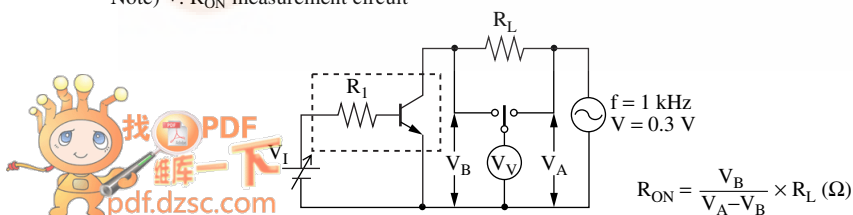
Internal Connection

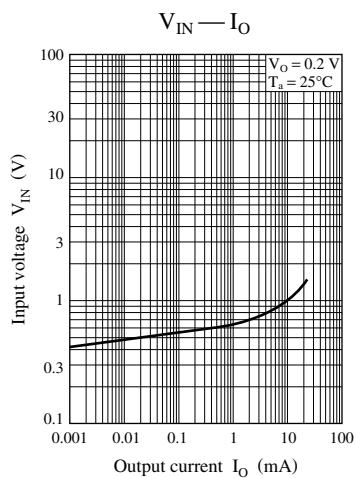
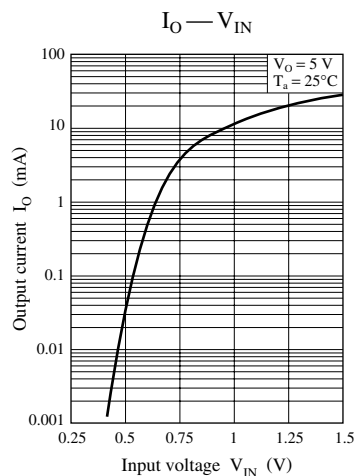
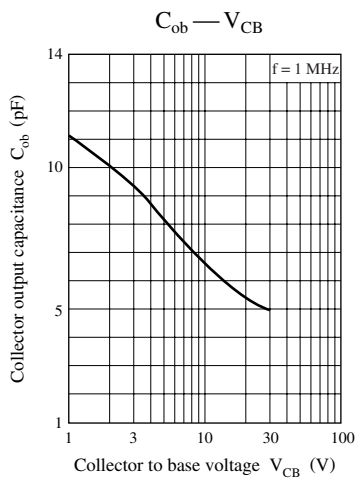
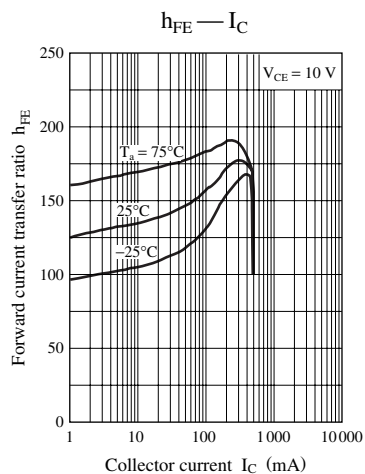
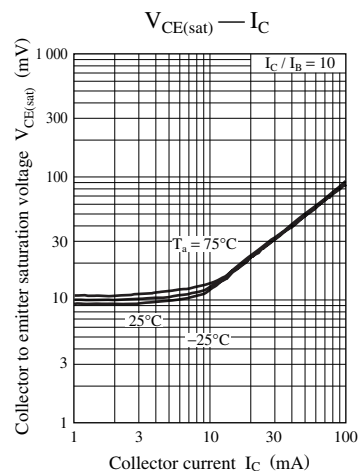
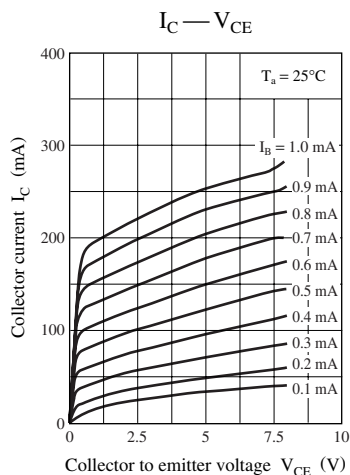
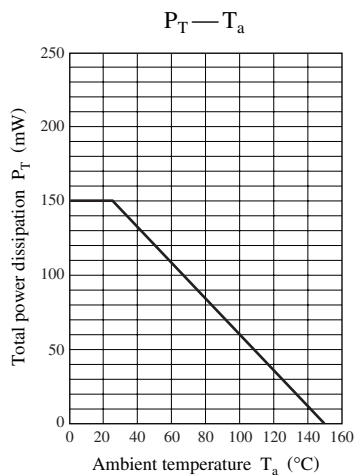


■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

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	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$			1	μA
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%	10	+30%	kΩ
ON-resistance *	R_{ON}	$V_I = 7 \text{ V}, R_L = 1 \text{ k}\Omega, f = 1 \text{ kHz}$		1.5		Ω
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





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