

UNR2225/2226/2227 (UN2225/2226/2227)

Silicon NPN epitaxial planer transistor

For muting

■ Features

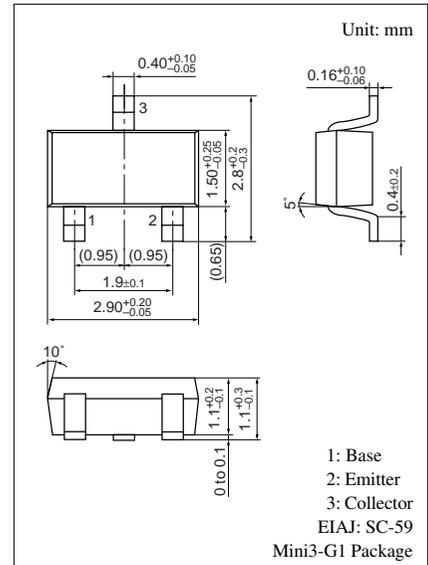
- Low collector to emitter saturation voltage $V_{CE(sat)}$, optimum for the muting circuit. $V_{CE(sat)}$: 30 mV (typ.)
- The use with high current value is possible. I_C : 600 mA

■ Resistance by Part Number

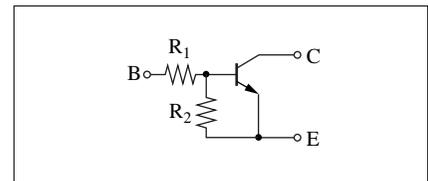
	Marking symbol	(R ₁)	(R ₂)
• UNR2225	FZ	10 kΩ	—
• UNR2226	FY	4.7 kΩ	—
• UNR2227	FW	6.8 kΩ	6.8 kΩ

■ Absolute Maximum Ratings T_a = 25°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	°C
Storage temperature	T _{stg}	-55 to +150	°C



Internal Connection



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

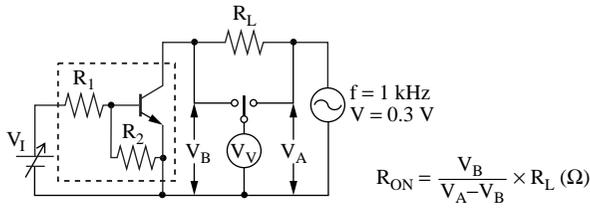
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I _{CBO}	V _{CB} = 30 V, I _E = 0			1	μA
Emitter cutoff current	I _{EBO}	V _{EB} = 5 V, I _C = 0			1	μA
Collector to base voltage	V _{CBO}	I _C = 1 μA, I _E = 0	30			V
Collector to emitter voltage	V _{CEO}	I _C = 1 mA, I _B = 0	20			V
Emitter to base voltage	V _{EBO}	I _E = 1 μA, I _C = 0	5			V
Forward current transfer ratio	UNR2227	h _{FE} V _{CE} = 5 V, I _C = 50 mA	70			
	UNR2225/2226		100		600	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 50 mA, I _B = 2.5 mA			80	mV
Input resistance	UNR2226	R ₁	-30%	4.7	+30%	kΩ
	UNR2227			6.8		
	UNR2225			10		
Resistance ratio	UNR2227	R ₁ /R ₂	0.8	1.0	1.2	
ON-resistance *	UNR2226	R _{ON}	V _I = 7 V, R _L = 1 kΩ, f = 1 kHz	0.95		
	UNR2227			1.1		
	UNR2225			1.5		
Transition frequency	f _T	V _{CB} = 10 V, I _E = -50 mA, f = 200 MHz		200		MHz

Note) *: Refer to R_{ON} measurement circuit

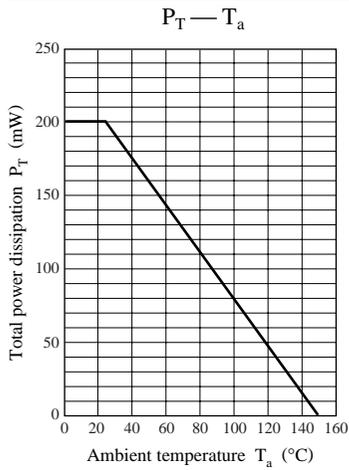
Note) The part number in the parenthesis shows conventional part number.

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

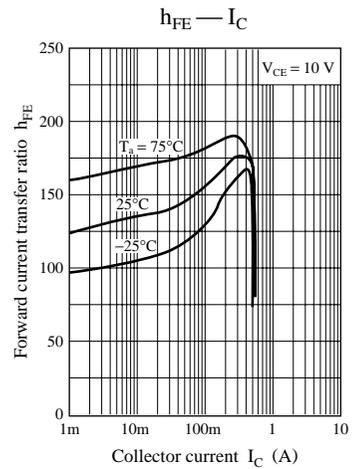
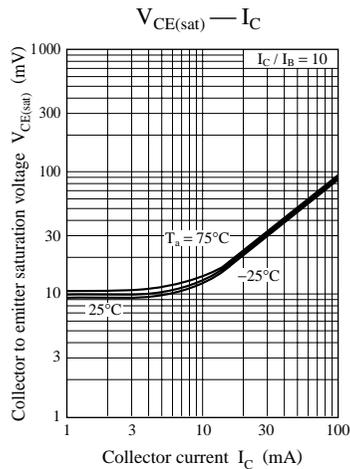
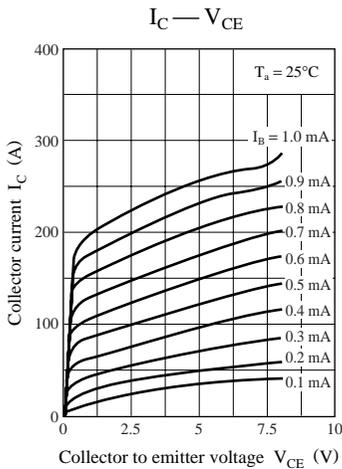
- R_{ON} measurement circuit

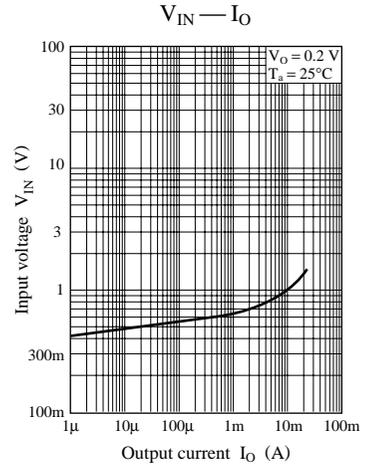
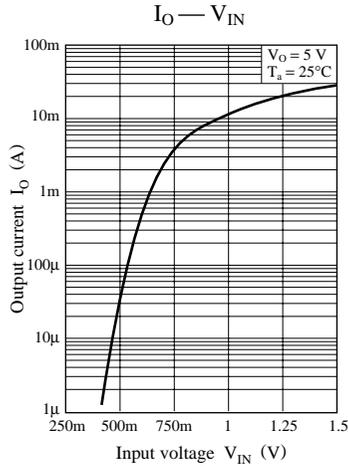
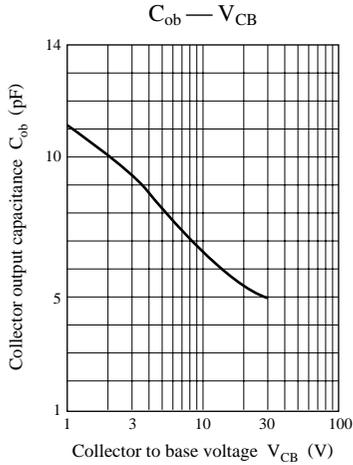


Common characteristics chart

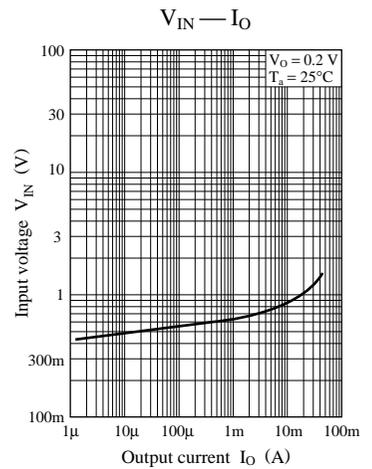
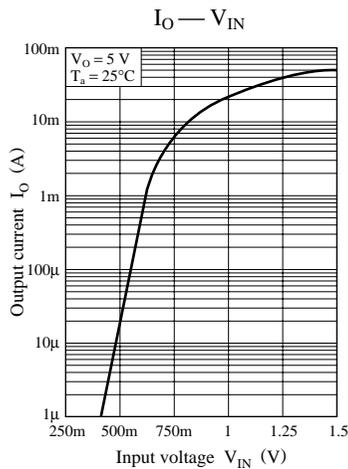
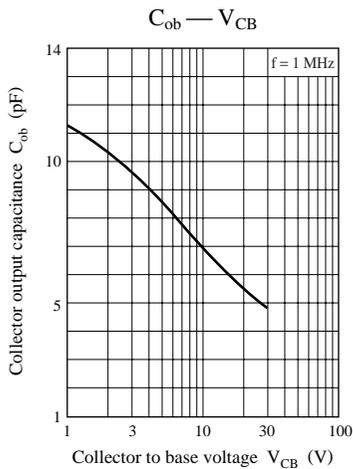
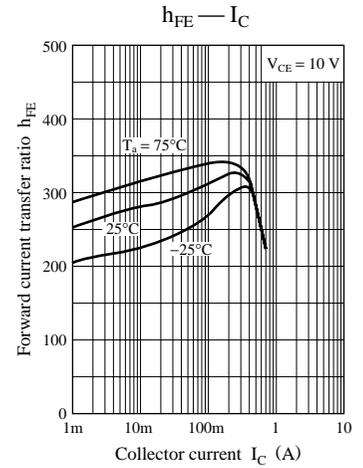
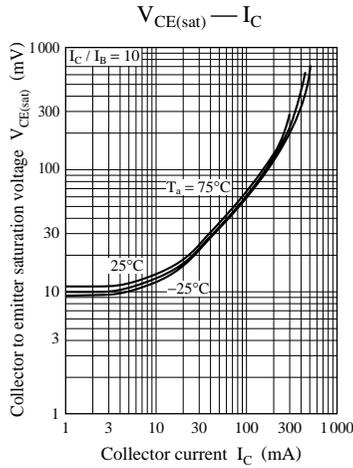
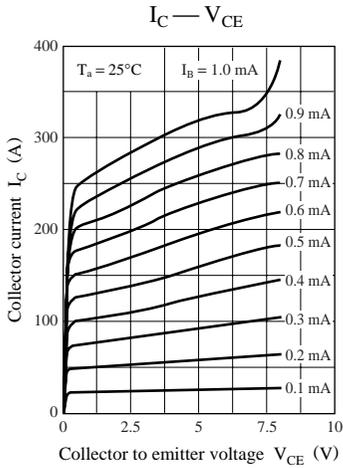


Characteristics charts of UNR2225

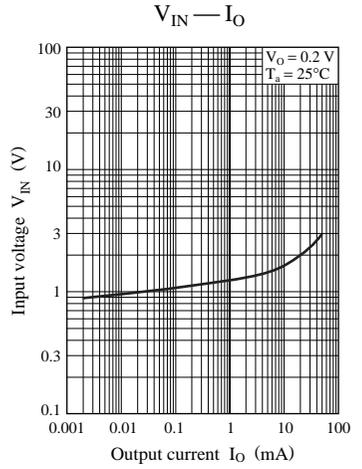
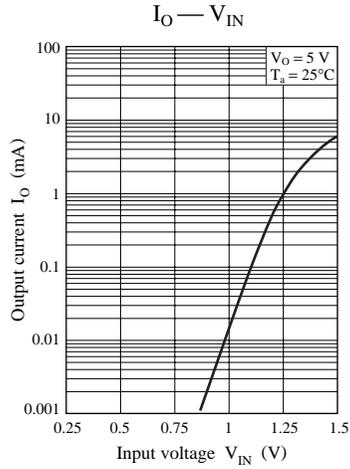
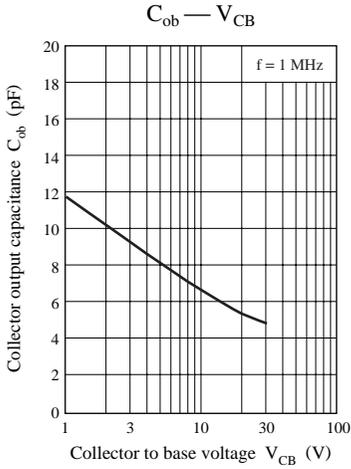
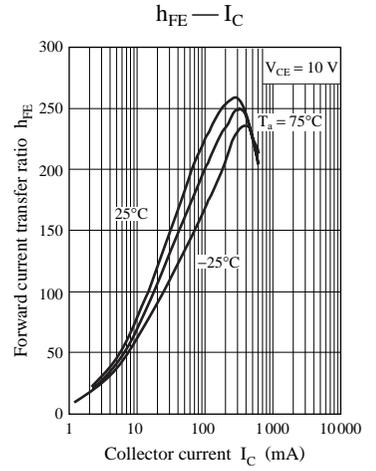
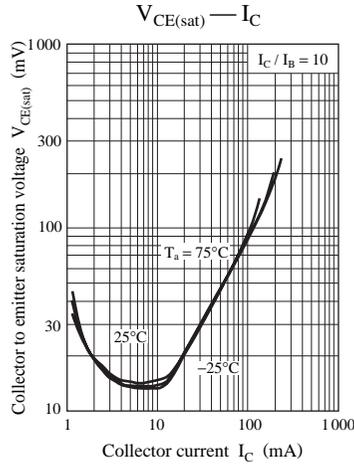
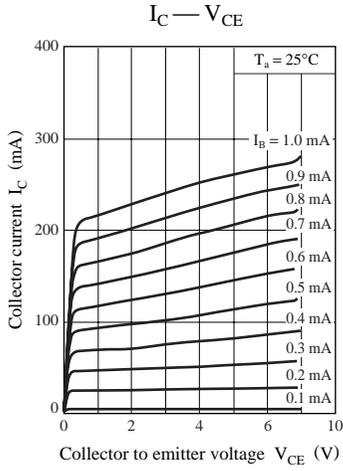




Characteristics charts of UNR2226



Characteristics charts of UNR2227



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