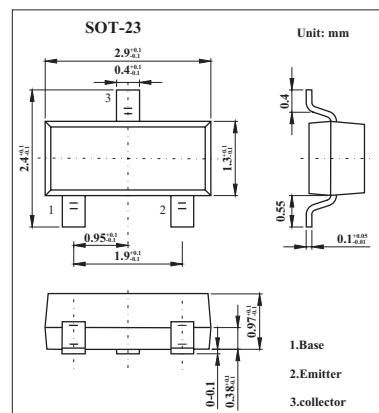


NPN Epitaxial Silicon Transistor

2SC3663

■ Features

- Low-voltage, low-current, low-noise and high-gain
 $NF = 3.0 \text{ dB TYP. } @V_{CE} = 1 \text{ V, } I_C = 250 \text{ PA, } f = 1.0 \text{ GHz}$
 $GA = 3.5 \text{ dB TYP. } @V_{CE} = 1 \text{ V, } I_C = 250 \text{ PA, } f = 1.0 \text{ GHz}$
- Ideal for battery drive of pagers, compact radio equipment cordless phones, etc.
- Gold electrode gives high reliability.
- Mini mold package, ideal for hybrid ICs.



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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	15	V
Collector to emitter voltage	V_{CEO}	8	V
Emitter to base voltage	V_{EBO}	2	V
Collector current	I_C	5	mA
Total power dissipation	P_T	50	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-65 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB} = 5 \text{ V, } I_E = 0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 1 \text{ V, } I_C = 0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 1 \text{ V, } I_C = 250 \text{ PA, pulse}$	50	100	250	
Gain Bandwidth Product	f_T	$V_{CE} = 1 \text{ V, } I_C = 1 \text{ mA}$		4		GHz
Insertion Power Gain	$ S_{21e} ^2$	$V_{CE} = 1 \text{ V, } I_C = 1 \text{ mA, } f = 1 \text{ GHz}$	4.0	6.5		dB
Maximum Available Gain	MAG	$V_{CE} = 1 \text{ V, } I_C = 1 \text{ mA, } f = 1 \text{ GHz}$		12.5		dB
Noise Figure	NF	$V_{CE} = 1 \text{ V, } I_C = 250 \mu\text{A, } f = 1.0 \text{ GHz}$	3.0	4.5		dB
Associated Power Gain	GA	$V_{CE} = 1 \text{ V, } I_C = 250 \mu\text{A, } f = 1.0 \text{ GHz}$		3.5		dB
Collector Capacitance	C_{ob}	$V_{CB} = 1 \text{ V, } I_E = 0, f = 1.0 \text{ MHz}$		0.4	0.6	pF

■ Marking

Marking	R62
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