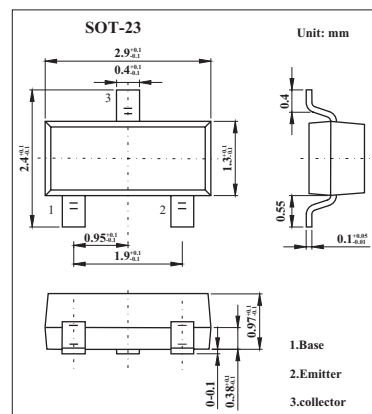


Silicon NPN Epitaxial

2SC2735

■ Features

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}$, $I_E = 0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}$, $R_{BE} = \infty$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}$, $I_C = 0$	3			V
Collector cutoff current	I_{CBO}	$V_{CB} = 10\text{V}$, $I_C = 0$			0.5	μA
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}$, $I_B = 5\text{mA}$			1.0	V
DC current transfer ratio	h_{FE}	$V_{CE} = 10\text{V}$, $I_C = 5\text{mA}$	40			
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		0.85	1.5	pF
Gain bandwidth product	CG	$V_{CC} = 6\text{V}$, $I_C = 2\text{mA}$, $f = 900\text{MHz}$, $f_{osc} = 930\text{MHz}$ (0dBm), $f = 30\text{MHz}$	600	1200		MHz
Oscillating output voltage	V_{OSC1}	$V_{CC} = 6\text{V}$, $I_C = 5\text{mA}$, $f = 930\text{MHz}$		210		mV
	V_{OSC2}	$V_{CC} = 12\text{V}$, $I_C = 7\text{mA}$, $f_{osc} = 930\text{MHz}$		130		mV
Conversion gain	CG	$V_{CC} = 12\text{V}$, $I_C = 2\text{mA}$, $f = 200\text{MHz}$, $f_{osc} = 230\text{MHz}$ (0dBm)		21		dB
Noise figure	NF	$V_{CC} = 12\text{V}$, $I_C = 2\text{mA}$, $f = 200\text{MHz}$, $f_{osc} = 230\text{MHz}$ (0dBm)		6.5		dB

■ Marking

Marking	JC
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