Instruments & Components

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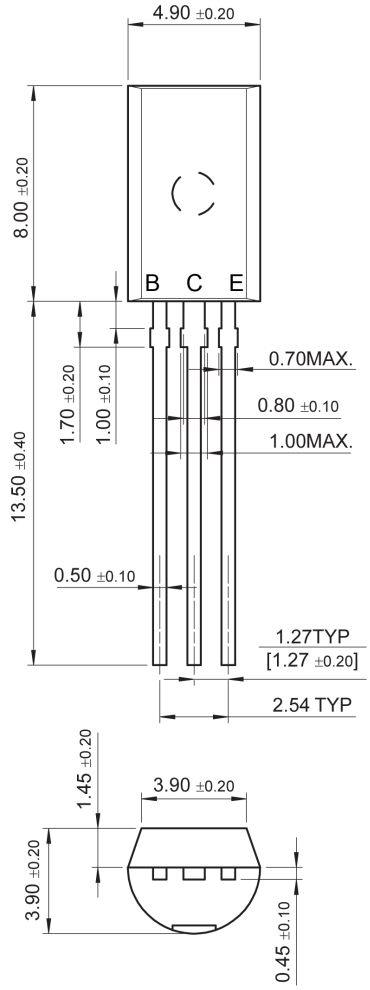
2SC2053

eleflow Technologies

TO-92L



TO-92L Package

Description

The Eleflow 2SC2053 is a silicon NPN epitaxial planar type transistor designed for RF power amplifiers within the VHF band, ideal for mobile radio applications.

Features

- High power gain: Gpe ≥ 15.7dB
  @Vcc = 13.5V, Po = 150mW, f = 175MHz
- Emitter ballasted construction for reliability and performance.
- Manufactured incorporating recyclable RoHS compliant materials.

Application

Driver amplifier applications within the VHF band.

Absolute Maximum Ratings (Tc = 25°C unless otherwise specified)

Symbol	Parameter	Conditions	Ratings	Unit
V_{cbo}	Collector to base voltage		40	V
V_{ebo}	Emitter to base voltage		4	V
V_{eco}	Collector to emitter voltage	$R_{be} = \infty$	17	V
I_c	Collector current		0.3	A
P_c	Collector dissipation	T_a = 25°C	0.6	W
T_j	Junction temperature		135	°C
T_{stg}	Storage temperature		-55 to 135	°C
R_{th-a}	Thermal resistance	Junction to ambient	183	°C/W
R_{th-c}				

Note: Above parameters are guaranteed independently

Electrical Characteristics (Tc = 25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)ebo}$	Emitter to base breakdown voltage	I_e = 1mA, I_c = 0	4			V
$V_{(BR)cbo}$	Collector to base breakdown voltage	I_c = 1mA, I_e = 0	40			V
$V_{(BR)ceo}$	Collector to emitter breakdown voltage	I_c = 10mA, $R_{be} = \infty$	17			V
I_{cbo}	Collector cut-off current	V_{cb} = 15V, I_e = 0			20	μA
I_{ebo}	Emitter cut-off current	V_{eb} = 3V, I_c = 0			20	μA
h_{fe}	DC forward current gain*	V_{ce} = 10V, I_c = 10mA	10	50	180	
P_o	Output power	V_{cc} = 13.5V, P_{in} = 4mW, F = 175MHz	150	200		mW
η_c	Collector efficiency		40	50		%

Note: *Pulse test, Pw = 150μS, duty = 5%

Above parameters, ratings, limits and conditions are subject to change

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