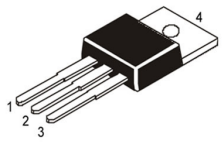
Instruments & Components

Exceeding Expectations - We Build Trust

eleflow Technologies

2SC1972

Pin Configuration
1.Base
2.Emitter
3.Collector
4.Emitter



All dimensions in mm

DIM	MIN.	MAX.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D		0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J		0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N		31.24
O	DEG 7	

Description

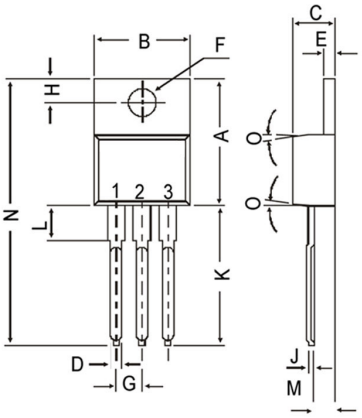
The Eleflow 2SC1972 is a silicon NPN epitaxial planar type transistor designed for RF power amplifiers within the VHF band, ideal for mobile radio applications.

Features

- High power gain: Gpe ≥ 7.5dB
  @Vcc = 13.5V, Po = 14W, f = 175MHz
- Emitter ballasted construction for reliability and performance.
- Manufactured incorporating recyclable RoHS compliant materials.
- Ability to periodically withstand in excess of 20:1 VSWR load when operated at Vcc = 15.2V, Po = 18W, f = 175MHz.

Application

10 to 14 watts output power amplifier applications within the VHF band.



TO-220 Package

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

Symbol	Parameter	Conditions	Ratings	Unit
V_{cbo}	Collector to base voltage		35	V
V_{ebo}	Emitter to base voltage		4	V
V_{eco}	Collector to emitter voltage	$R_{be} = \infty$	17	V
I_c	Collector current		3.5	A
P_c	Collector dissipation	T_a = 25°C	1.5	W
		T_c = 25°C	25	W
T_j	Junction temperature		175	°C
T_{stg}	Storage temperature		-55 to 175	°C
R_{th-a}	Thermal resistance	Junction to ambient	100	°C/W
R_{th-c}		Junction to case	6	°C/W

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 = 10mA, I_c = 0	4			V
$V_{(BR)cbo}$	Collector to base breakdown voltage	I_c = 10mA, I_e = 0	35			V
$V_{(BR)ceo}$	Collector to emitter breakdown voltage	I_c = 50mA, $R_{be} = \infty$	17			V
I_{cbo}	Collector cut-off current	V_{cb} = 25V, I_e = 0			1000	μA
I_{ebo}	Emitter cut-off current	V_{eb} = 3V, I_c = 0			500	μA
h_{fe}	DC forward current gain*	V_{ce} = 10V, I_c = 100mA	10	50	180	
P_o	Output power	V_{cc} = 13.5V, P_{in} = 2.5W, F = 175MHz	14	15		W
η_c	Collector efficiency		60	70		%

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

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

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More detailed product information is available upon request, please contact us.