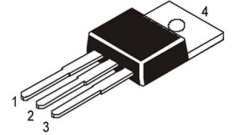




2SC1969

Pin Configuration

- 1.Base
- 2.Collector
- 3.Emitter
- 4.Collector



Description

The Eleflow 2SC1969 is a silicon NPN epitaxial planar type transistor designed for RF power amplifiers within the HF band, ideal for mobile radio applications.

Features

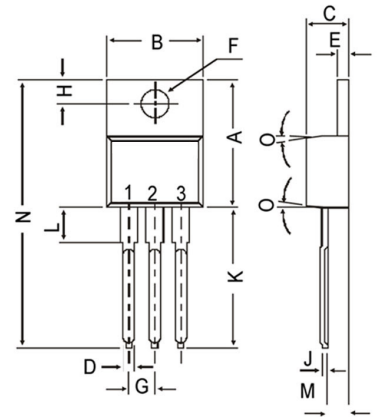
- High power gain: $G_{pe} \geq 12\text{dB}$
@ $V_{cc} = 12\text{V}$, $P_o = 16\text{W}$, $f = 27\text{MHz}$
- Emitter ballasted construction for reliability and performance.
- Manufactured incorporating recyclable RoHS compliant materials.
- Ability to periodically withstand infinite VSWR load when operated
@ $V_{cc} = 16\text{V}$, $P_o = 20\text{W}$, $f = 27\text{MHz}$.

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

All dimensions in mm

Application

10 to 14 watts output power class AB amplifier applications within HF band.



TO-220 Package

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

Symbol	Parameter	Conditions	Ratings	Unit
Vcbo	Collector to base voltage		60	V
Vebo	Emitter to base voltage		5	V
Veco	Collector to emitter voltage	$R_{be} = \infty$	25	V
Ic	Collector current		6	A
Pc	Collector dissipation	$T_a = 25^\circ\text{C}$ $T_c = 25^\circ\text{C}$	1.7 20	W W
Tj	Junction temperature		150	°C
Tstg	Storage temperature		-55 to 150	°C
Rth-a	Thermal resistance	Junction to ambient	73.5	°C/W
Rth-c		Junction to case	6.25	°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	$I_e = 5\text{mA}$, $I_c = 0$	5			V
V(BR)cbo	Collector to base breakdown voltage	$I_c = 1\text{mA}$, $I_e = 0$	60			V
V(BR)ceo	Collector to emitter breakdown voltage	$I_c = 10\text{mA}$, $R_{be} = \infty$	25			V
Icbo	Collector cut-off current	$V_{cb} = 4\text{V}$, $I_e = 0$			100	µA
Iebo	Emitter cut-off current	$V_{eb} = 4\text{V}$, $I_c = 0$			100	µA
hfe	DC forward current gain*	$V_{ce} = 12\text{V}$, $I_c = 10\text{mA}$	10	50	100	
Po	Output power	$V_{cc} = 12\text{V}$, $P_{in} = 1000\text{mW}$, $F = 27\text{MHz}$	13	18		W
ηc	Collector efficiency		60	70		%

Note: *Pulse test, $P_w = 150\mu\text{s}$, duty = 5%

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