

## isc Silicon NPN RF Transistor

## 2SC3355

TO-92 1: Base 2: Emitter 3: Collector

## DESCRIPTION

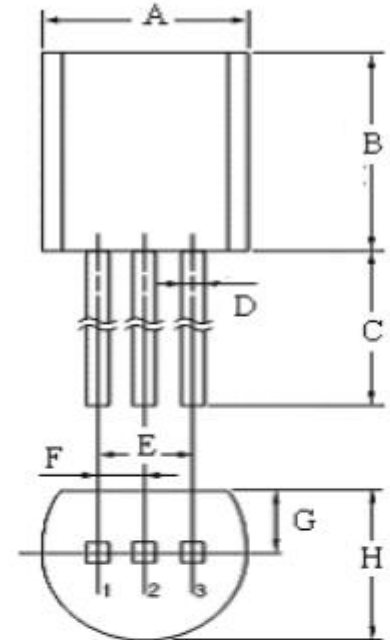
- Low Noise  
NF = 1.5dB TYP @ VCE=10V, IC=7mA, f=1GHz
- High Power Gain  
 $|S_{21e}|^2 = 9.5\text{dB TYP @ VCE=10V, IC=20mA, f=1GHz}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- The 2SC3355 is an NPN silicon epitaxial transistor designed for low noise amplifier at VHF, UHF and CATV band.

## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	20	V
V <sub>CEO</sub>	Collector-Emitter Voltage	12	V
V <sub>EBO</sub>	Emitter-Base Voltage	3	V
I <sub>C</sub>	Collector Current-Continuous	100	mA
P <sub>c</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	500	mW
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C



symbol	min (mm)	max (mm)
A	4.33	4.83
B	4.33	4.83
C	14.0	15.0
D	0.36	0.56
E	2.54	
F	1.27	
G	0.92	1.12
H	3.40	3.60

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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 1.0 V, I <sub>C</sub> = 0			0.1	uA
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 10V; I <sub>E</sub> = 0			0.1	uA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 20mA; V <sub>CE</sub> = 10V	50	150	250	
f <sub>T</sub>	Current-Gain—Bandwidth Product	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA, f=1GHz		6.5		GHz
C <sub>re</sub>	Output Capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0mA, f=1MHz		0.65		pF
S <sub>21e</sub>   <sup>2</sup>	Insertion Power Gain	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA, f=1GHz		9.5		dB
NF	Noise Figure	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 7 mA, f = 1.0 GHz		1.5	2	dB
		V <sub>CE</sub> =10V, I <sub>C</sub> =40mA, f=1GHz		2.4		

## hFE Classification

Class	A-B	C-D	E-F	G-H	I
Marking	K9C				
hFE	60-100	100-140	140-180	180-220	220-250

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