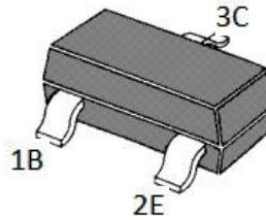




## NPN Silicon Epitaxial Planar Transistor

for microwave low noise amplifier at VHF, UHF and CATV band

The transistor is subdivided into three groups, Q, R and S, according to its DC current gain.



SOT-23-3L Plastic Package

HFE	MARKING
Q	R23
R	R24
S	R25

### Absolute Maximum Ratings (T<sub>a</sub> = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V <sub>CBO</sub>	20	V
Collector Emitter Voltage	V <sub>CEO</sub>	12	V
Emitter Base Voltage	V <sub>EBO</sub>	3	V
Collector Current	I <sub>C</sub>	100	mA
Power Dissipation	P <sub>tot</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>s</sub>	- 65 to + 150	°C

### Characteristics (T<sub>a</sub> = 25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 20 mA Current Gain Group	Q	50	-	100	-
	R	80	-	160	-
	S	125	-	250	-
Collector Cutoff Current at V <sub>CB</sub> = 10 V	I <sub>CBO</sub>	-	-	1	μA
Emitter Cutoff Current at V <sub>EB</sub> = 1 V	I <sub>EBO</sub>	-	-	1	μA
Gain Bandwidth Product at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 20 mA	f <sub>T</sub>	-	3	-	GHz
Feed-Back Capacitance at V <sub>CB</sub> = 10 V, f = 1 MHz	C <sub>re</sub> <sup>1)</sup>	-	0.55	1	pF
Noise Figure at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 7 mA, f = 1 GHz	NF	-	1.1	2	dB

1) The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.



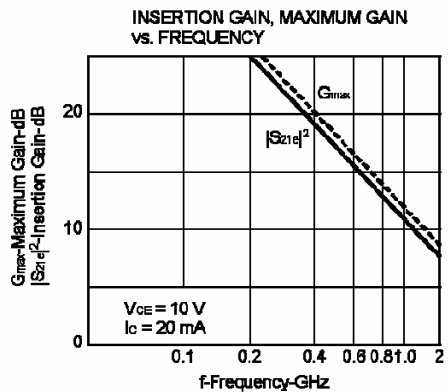
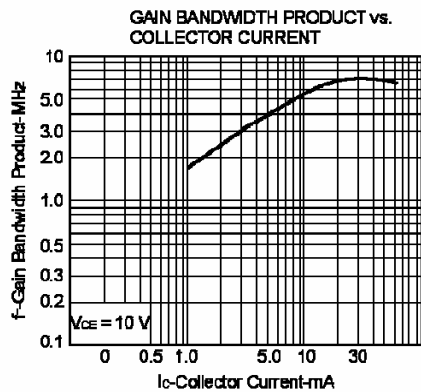
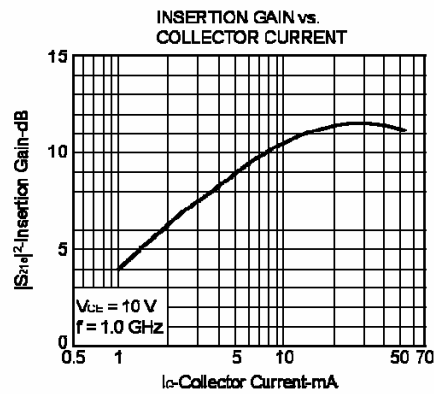
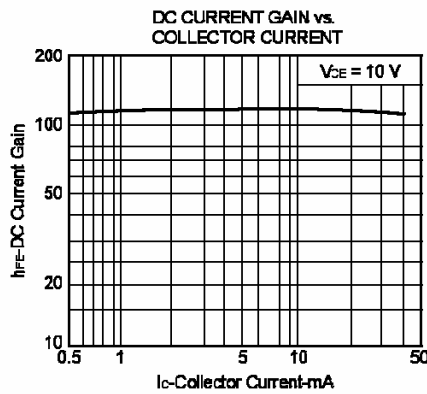
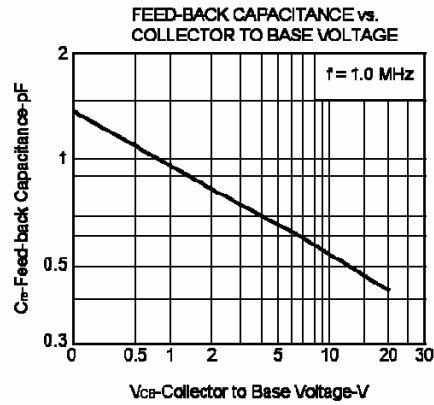
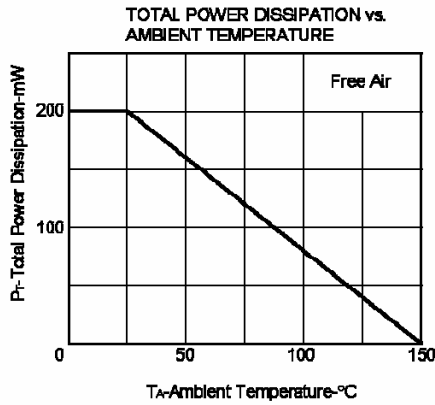
**CHINA BASE**  
INTERNATIONAL

**SOT-23-3L**



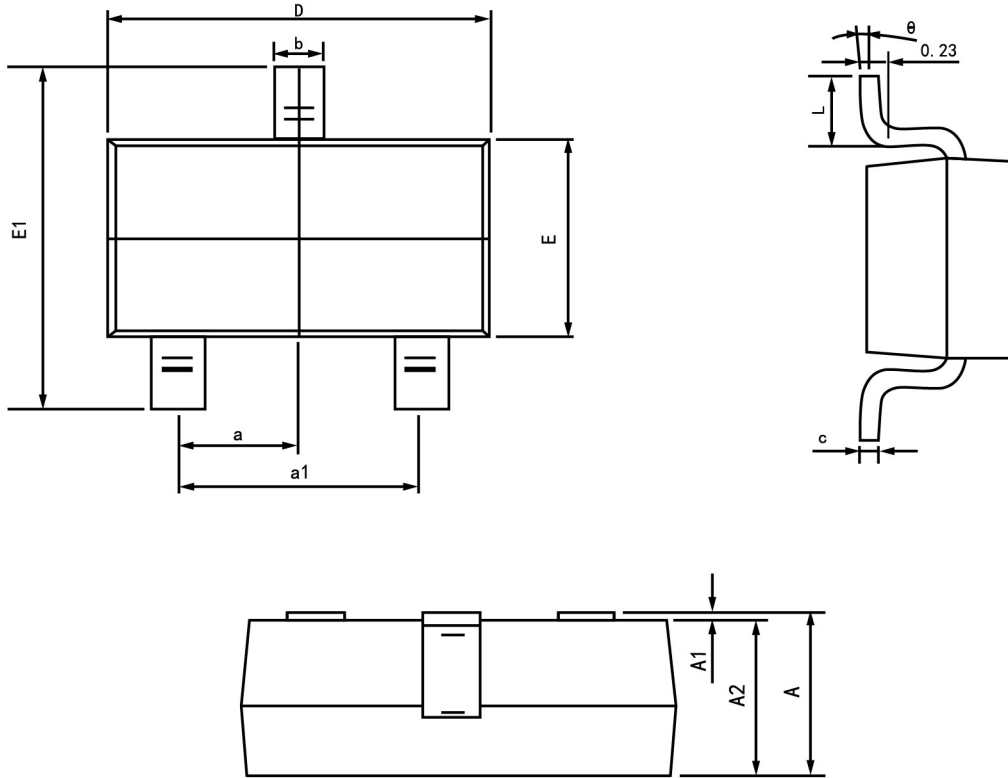
**MMBTSC3356 -3G**

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### SOT-23-3L Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.820	3.020
E	1.500	1.700
E1	2.650	2.950
e	0.950 (Basic)	
e1	1.800	2.000
L	0.300	0.600
θ	0°	8°