



BF909; BF909R

DATA SHEET

BF909; BF909R

FEATURES

- Specially designed for use at 5 V supply voltage
- High forward transfer admittance
- Short channel transistor with high forward transfer admittance to input capacitance ratio
- Low noise gain controlled amplifier up to 1 GHz
- Superior cross-modulation performance during AGC.

APPLICATIONS

- VHF and UHF applications with 3 to 7 V supply voltage such as television tuners and professional communications equipment.

DESCRIPTION

Enhancement type field-effect transistor in a plastic microminiature SOT143 or SOT143R package. The

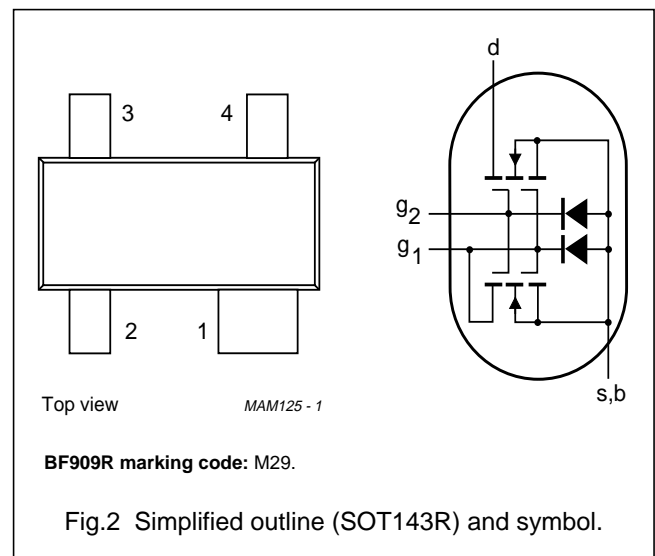
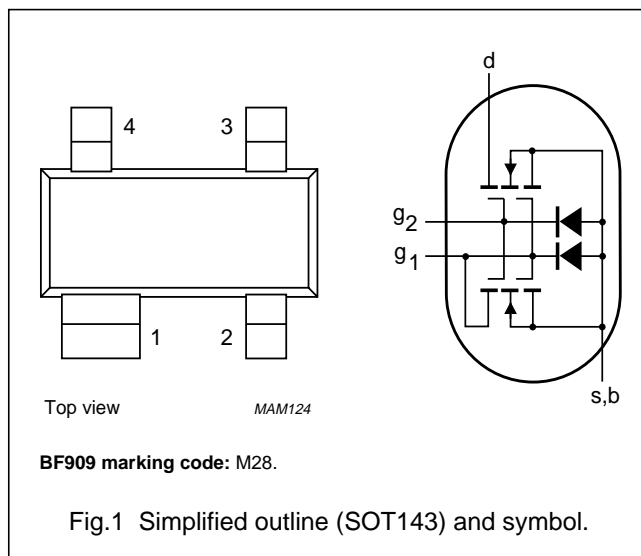
transistor consists of an amplifier MOS-FET with source and substrate interconnected and an internal bias circuit to ensure good cross-modulation performance during AGC.

CAUTION

The device is supplied in an antistatic package. The gate-source input must be protected against static discharge during transport or handling.

PINNING

PIN	SYMBOL	DESCRIPTION
1	s, b	source
2	d	drain
3	g_2	gate 2
4	g_1	gate 1



QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_{DS}	drain-source voltage		–	–	7	V
I_D	drain current		–	–	40	mA
P_{tot}	total power dissipation		–	–	200	mW
T_j	operating junction temperature		–	–	150	°C
$ y_{fs} $	forward transfer admittance		36	43	50	mS
C_{ig1-s}	input capacitance at gate 1		–	3.6	4.3	pF
C_{rs}	reverse transfer capacitance	$f = 1 \text{ MHz}$	–	35	50	fF
F	noise figure	$f = 800 \text{ MHz}$	–	2	2.8	dB