BF256A to C

RATINGS

Limiting values in accordance with the Absolute Maximum System (IEC 134)

Drain-source voltage	$\pm V_{DS}$	max.	30	V
Drain-gate voltage (open source)	V_{DGO}	max.	30	V
Gate-source voltage (open drain)	$-V_{GSO}$	max.	30	V
Gate current	I_G	max.	10	mA
Total power dissipation				
up to T_{amb} = 75 °C	P_{tot}	max.	300	mW
up to T_{amb} = 90 °C	P_{tot}	max.	300	mW 1)
Storage temperature	T_{stg}		−65 to + 150	°C
Junction temperature	T_j	max.	150	°C

THERMAL RESISTANCE

From junction to ambient in free air	$R_{th\ j\text{-}a}$	=	0,25	K/mW
From junction to ambient	$R_{th\ j\text{-}a}$	=	0,20	K/mW 1)

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise specified

Gate cut-off current						
$-V_{GS}$ = 20 V; V_{DS} = 0	$-I_{GSS}$	<		5		nA
Drain current 2)		BF256A	B	C		
V_{DS} = 15 V; V_{GS} = 0	I_{DSS} 3)	> 3	6	11		mA
		< 7	13	18		mA
Gate-source breakdown voltage						
$-I_G$ = 1 μA; V_{DS} = 0	$-V_{(BR)GSS}$	>		30		V
Gate-source voltage						
I_D = 200 μA; V_{DS} = 15 V	$-V_{GS}$ 3)			0,5 to 7,5		V

1) Transistor mounted on printed circuit board, maximum lead length 3 mm, mounting pad for drain lead minimum 10 mm x 10 mm.

2) Measured under pulse conditions: t_p = 300 μs; $\delta \leqslant 0{,}02$.

3) BF256B/1: I_{DSS} = 6 to 8 mA; $-V_{GS}$ = 1,4 to 2,6 V.

y-parameters (common source)

Transistor admittance at f = 1 kHz				
V_{DS} = 15 V; V_{GS} = 0	$\lvert y_{fs}\rvert$	>	4,5	mS 1)
		typ.	5	mS 1)
Output capacitance at f = 1 MHz				
V_{DS} = 20 V; V_{GS} = 0	C_{os}	typ.	1,2	pF
Feedback capacitance at f = 1 MHz				
V_{DS} = 20 V; $-V_{GS}$ = 1 V	C_{rs}	typ.	0,7	pF
Cut-off frequency				
V_{DS} = 15 V; V_{GS} = 0	f_{gfs}	typ.	1	GHz 2)
Noise figure at f = 800 MHz				
V_{DS} = 10 V; R_S = 47 Ω	F	typ.	7,5	dB
Power gain at f = 800 MHz				
V_{DS} = 15 V; R_S = 47 Ω	G_p	typ.	11	dB

1) Measured under pulse conditions: t_p = 300 μs; $\delta \leqslant 0{,}02$.

2) The frequency at which g_{fs} is 0,7 of its value at 1 kHz.