BF 960

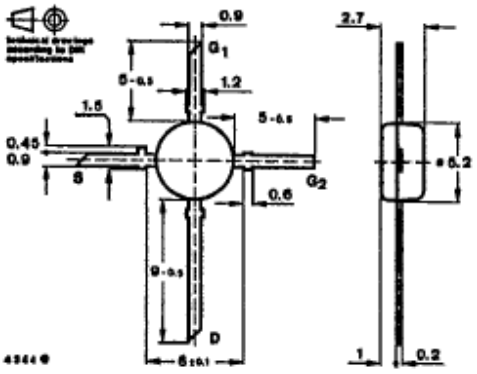
N-Channel Dual Gate MOS-Fieldeffect Tetrode · Depletion Mode

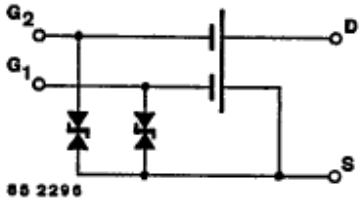
Applications: Input- and Mixerstages especially for UHF TV-tuners up to 900 MHz

Features:

- Integrated Gate protection diodes
- High cross modulation performance
- Low noise figure
- High AGC-range
- Low feedback capacitance
- Low input capacitance

Dimensions in mm





Case
50 B 4 DIN 41 867
JEDEC TO 50
Weight max. 0.1 g

Absolute maximum ratings

Drain Source Voltage	V_{DS}	20	V
Drain current	I_D	30	mA
Gate 1/Gate 2-Source peak current	$\pm I_{G1/2SM}$	10	mA
Total power dissipation $T_{amb} = 60$ °C	P_{tot}	200	mW
Channel temperature	T_C	150	°C
Storage temperature range	T_{stg}	−55 ... +150	°C

Thermal resistance

		Min.	Typ.	Max.	
Channel ambient mounted on pc-board one side Cu 35 µm thickness 40 x 25 x 1.5 mm³	R_{thCA}			450	K/W

DC characteristics		Min.	Typ.	Max.	
T_{amb} = 25 °C, unless otherwise specified					
Drain-source breakdown voltage I_D = 10 µA, $-V_{G1S} = -V_{G2S}$ = 4 V	$V_{(BR)DS}$	20			V
Gate 1-Source breakdown voltage $\pm I_{G1S}$ = 10 mA, $V_{G2S} = V_{DS}$ = 0	$\pm V_{(BR)G1SS}$	6		20	V
Gate 2-Source breakdown voltage $\pm I_{G2S}$ = 10 mA, $V_{G1S} = V_{DS}$ = 0	$\pm V_{(BR)G2SS}$	6		20	V
Gate 1-Source cutt-off current $\pm V_{G1S}$ = 5 V, $V_{G2S} = V_{DS}$ = 0	I_{G1SS}			50	nA
Gate 2-Source cut-off curret $\pm V_{G2S}$ = 5 V, $V_{G1S} = V_{DS}$ = 0	I_{G2SS}			50	nA
Drain current V_{DS} = 15 V, V_{G1S} = 0, V_{G2S} = 4 V	I_{DSS}	2		20	mA
Gate 1-Source cutt-off voltage V_{DS} = 15 V, V_{G2S} = 4 V, I_D = 20 µA	$-V_{G1S(OFF)}$			2.7	V
Gate 2-Source cutt-off voltage V_{DS} = 15 V, V_{G1S} = 0 V, I_D = 20 µA	$-V_{G2S(OFF)}$			2.7	V
AC characteristics					
V_{DS} = 15 V, I_D = 7 mA, V_{G2S} = 4 V, f = 1 MHz, T_{amb} = 25 °C, unless otherwise specified					
Forward transadmitance	$\lvert y_{21} \rvert$	10	13		mS
Gate 1-Input capacitance	C_{iSSg1}		1.8		pF
Gate 2-Input capacitance V_{G1S} = 0, V_{G2S} = 4 V	C_{iSSg2}		1.0		pF
Feedback capacitance	C_{rSS} [1]		25		fF
Output capacitance	C_{oSS}		0.8		pF
Power gain V_{DS} = 15 V, I_D = 7 mA, V_{G2S} = 4 V, g_G = 2 mS, g_L = 5 mS, f = 200 MHz g_L = 1 mS, f = 800 MHz	 G_{ps} G_{ps}		 23 16.5		 dB dB
Noise figure g_G = 2 mS, f = 800 MHz V_{DS} = 15 V, I_D = 7 mA, V_{G2S} = 4 V, V_{G1S} = 0	F		2.2	3	dB