



# MMBFJ270

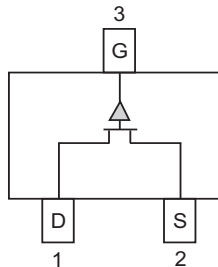
## P-CHANNEL SWITCH

### FEATURES

- This device is designed for low level analog switching sample and hold circuits and chopper stabilized amplifiers
- In compliance with EU RoHS 2002/95/EC directives

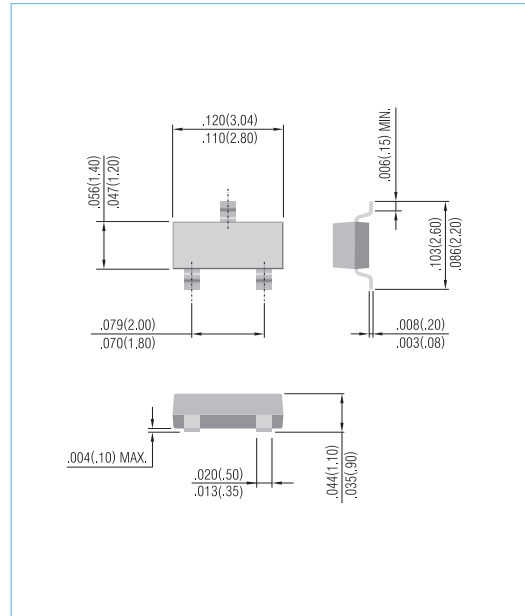
### MECHANICAL DATA

- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.008gram
- Marking : 270



SOT-23

Unit: inch ( mm )



### ABSOLUTE MAXIMUM RATINGS $T_J=25^\circ\text{C}$

PARAMETER	SYMBOL	VALUE	UNITS
Drain-Gate Voltage	$V_{DG}$	-30	V
Gate-Source Voltage	$V_{GS}$	30	V
Forward Gate Current	$I_{GF}$	50	mA
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNITS
Total Device Dissipation Derate above $25^\circ\text{C}$	$P_D$	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	556	$^\circ\text{C/W}$

Note 1 : Device mounted on FR-4 PCB, 70 x 60 x 1mm.

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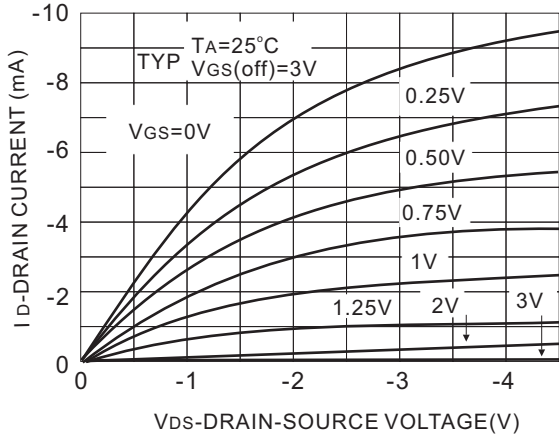
### ELECTRICAL CHARACTERISTICS $T_J=25^{\circ}\text{C}$

PARAMETER	SYMBOL	TEST CONDITION	MIN.	MAX.	UNITS
Off Characteristics					
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G=1.0\mu\text{A}, V_{DS}=0$	30	-	V
Gate Reverse Current	$I_{GSS}$	$V_{GS}=20\text{V}, V_{DS}=0$	-	200	pA
Gate-Source Cutoff Voltage	$V_{GS(OFF)}$	$V_{DS}=-15\text{V}, I_D=-1.0\text{nA}$	0.5	2.0	V
On Characteristics					
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-15\text{V}, V_{GS}=0$	-2.0	-15	mA
Forward Transferconductance	$g_{fs}$	$V_{GS}=0\text{V}, V_{DS}=15\text{V}, f=1.0\text{kHz}$	6000	15000	$\mu\text{mhos}$

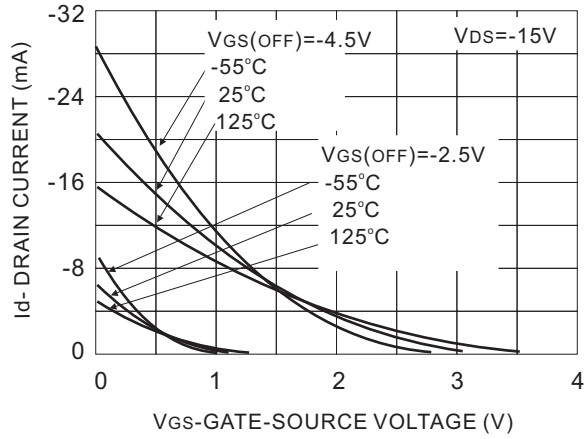


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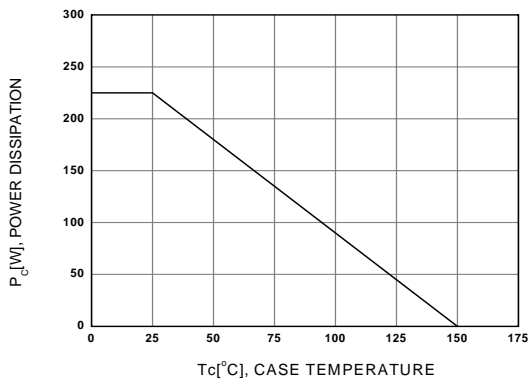
**Common Drain-Source**



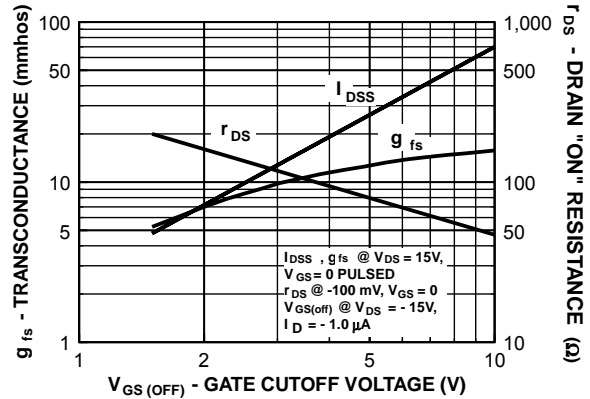
**Transfer Characteristics**



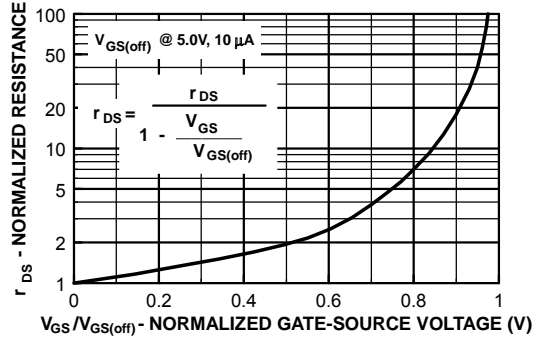
**Power Derating**



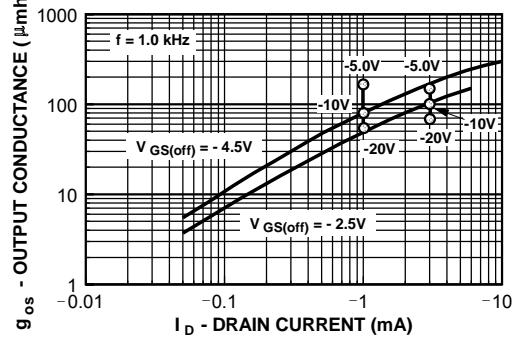
**Parameter Interactions**



**Normalized Drain Resistance vs Bias Voltage**



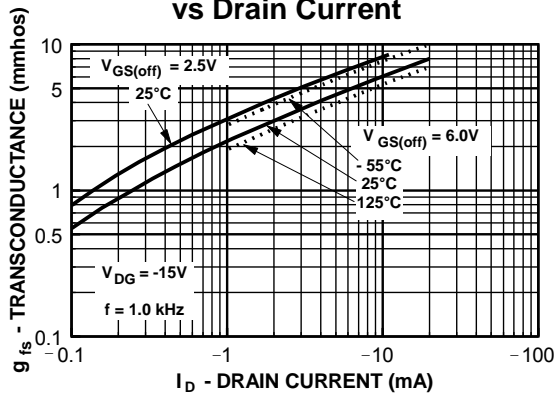
**Output Conductance vs Drain Current**



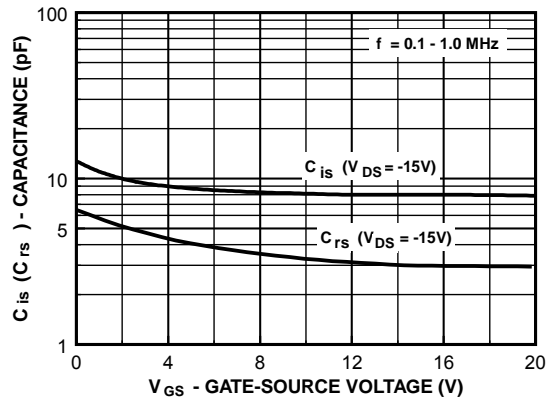


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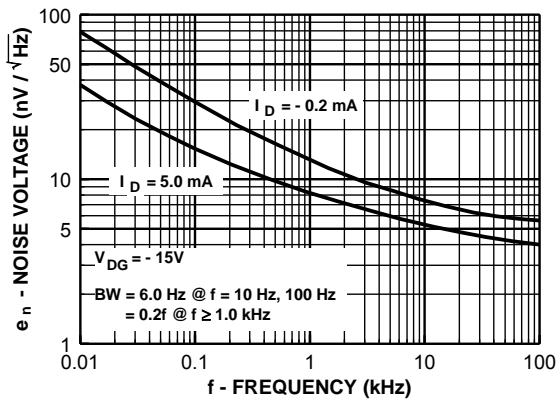
**Transconductance vs Drain Current**



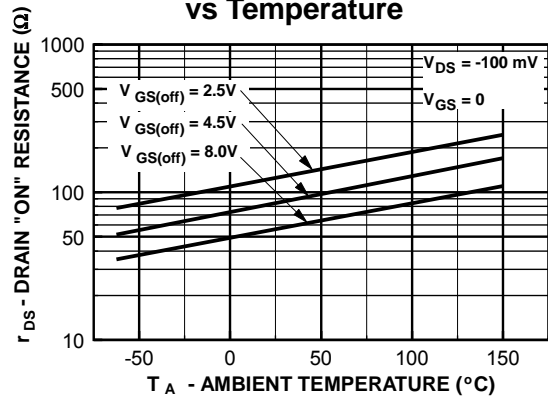
**Capacitance vs Voltage**



**Noise Voltage vs Frequency**



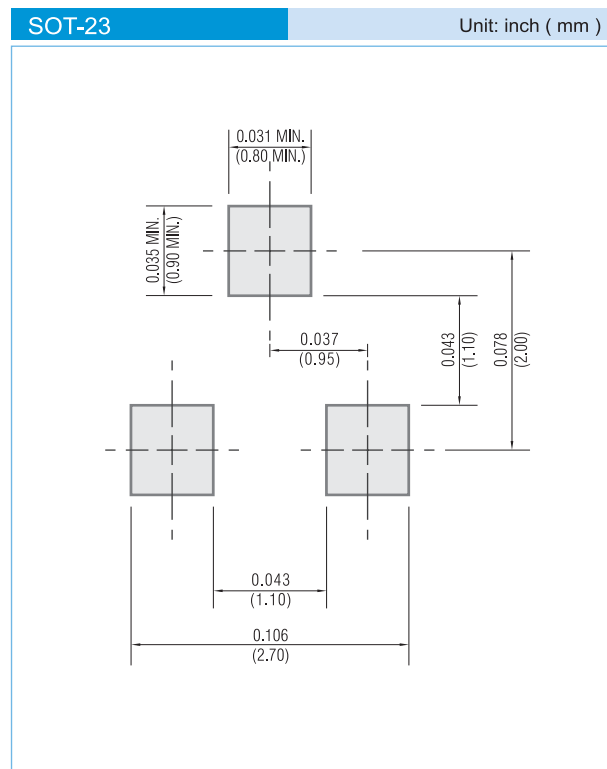
**Channel Resistance vs Temperature**





# MMBFJ270

## MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel

### LEGAL STATEMENT

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