

### Is Now Part of



## ON Semiconductor®

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### **J270**

### **P-Channel Switch**

- This device is designed for low level analog switching sample and hold circuits and chopper stabilized amplifiers.
- Sourced from process 88.



### 1. Drain 2. Gate 3. Source

### **Absolute Maximum Ratings\*** $T_a$ =25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
$V_{DG}$	Drain-Gate Voltage	-30	V
$V_{GS}$	Gate-Source Voltage	30	V
I <sub>GF</sub>	Forward Gate Current	50	mA
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Junction Temperature Range	-55 ~ 150	°C

<sup>\*</sup> This ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

- These rating are based on a maximum junction temperature of 150 degrees C.
   These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

### Electrical Characteristics T<sub>a</sub>=25°C unless otherwise noted

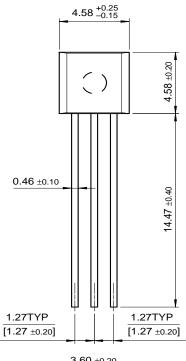
Symbol	Parameter	Test Condition	Min.	Max.	Units	
Off Charac	Off Characteristics					
V <sub>(BR)GSS</sub>	Gate-Source Breakdwon Voltage	$I_G = -1.0 \mu A, V_{DS} = 0$	30		V	
I <sub>GSS</sub>	Gate Reverse Current	$V_{GS} = -20V, V_{DS} = 0$		200	pА	
V <sub>GS(off)</sub>	Gate-Source Cutoff Voltage	$V_{DS} = -15V, I_{D} = 1.0nA$	0.5	2.0	V	
On Charac	On Characteristics					
I <sub>DSS</sub>	Zero-Gate Voltage Drain Current *	$V_{DS} = -15V, V_{GS} = 0$	-2.0	-15	mA	
Small Signal Characteristics						
gfs	Forward Transferconductance	$V_{GS} = 0V, V_{DS} = 15V, f = 1.0kHz$	6000	15000	μmhos	
goss	Common- Source Output Conductance	$V_{GS} = 0V, V_{DS} = 15V, f = 1.0kHz$		200	μmhos	

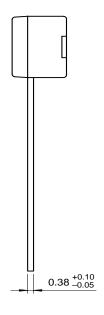
### Thermal Characteristics $\rm T_A=25^{\circ}C$ unless otherwise noted

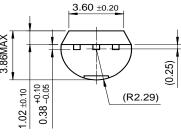
Symbol	Parameter	Max.	Units
P <sub>D</sub>	Total Device Dissipation	350	mW
	Derate above 25°C	2.8	mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

## **Package Dimensions**

TO-92







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CoolFET™	FASTr™	MicroFET™	PowerTrench <sup>®</sup>	SuperSOT™-6
$CROSSVOLT^{TM}$	FRFET™	MicroPak™	QFET <sup>®</sup>	SuperSOT™-8
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EnSigna™	I <sup>2</sup> C <sup>TM</sup>	OCX™	RapidConfigure™	UHC™
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