



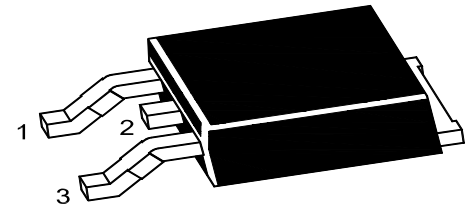
# PJM20H05NTE

## N-Channel Enhancement Mode Power MOSFET

### Features

- Fast Switching
- Low Gate Charge
- Low Reverse Transfer Capacitances
- $V_{DS} = 200V, I_D = 5A$   
 $R_{DS(on)} < 3\Omega @ V_{GS} = 4.5V$

TO-252

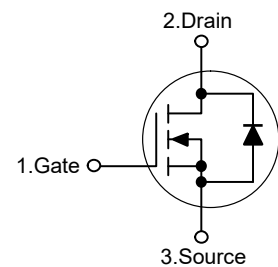


1. Gate 2.Drain 3.Source

### Applications

- LED Lighting
- Charger
- Standby Power

### Schematic Diagram



### Absolute Maximum Ratings

Ratings at 25°C case temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	200	V
Gate-Source Voltage	$V_{GS}$	$\pm 30$	V
Drain Current-Continuous	$I_D$	5	A
Drain Current-Pulsed <sup>Note1</sup>	$I_{DM}$	20	A
Single pulse avalanche energy <sup>Note4</sup>	$E_{AS}$	30	mJ
Maximum Power Dissipation	$P_D$	40	W
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C

### Thermal Characteristics

Thermal Resistance,Junction-to-Ambient <sup>Note2</sup>	$R_{\theta JA}$	62.5	°C/W
Maximum Junction-to-Case <sup>Note2</sup>	$R_{\theta JC}$	3.13	°C/W



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### Electrical Characteristics

(T<sub>C</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA	200	--	--	V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =200V, V <sub>GS</sub> =0V	--	--	1	μA
Gate-Body Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±30V, V <sub>DS</sub> =0V	--	--	±100	nA
Gate Threshold Voltage <sup>Note3</sup>	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.4	0.7	1.5	V
Drain-Source On-Resistance <sup>Note3</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =0.5A	--	2.5	3.0	Ω
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =0.5A	--	2.8	4.0	Ω
Forward Transconductance <sup>Note3</sup>	g <sub>FS</sub>	V <sub>DS</sub> =25V, I <sub>D</sub> =2.5A	--	1	--	S
<b>Dynamic Characteristics</b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =25V, V <sub>GS</sub> =0V, f=1MHz	--	80	--	pF
Output Capacitance	C <sub>oss</sub>		--	6	--	pF
Reverse Transfer Capacitance	C <sub>rss</sub>		--	2	--	pF
<b>Switching Characteristics</b>						
Turn-on Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> =100V, I <sub>D</sub> =5A, R <sub>G</sub> =10Ω	--	2	--	nS
Turn-on Rise Time	t <sub>r</sub>		--	4	--	nS
Turn-off Delay Time	t <sub>d(off)</sub>		--	6	--	nS
Turn-off Fall Time	t <sub>f</sub>		--	3	--	nS
Total Gate Charge	Q <sub>g</sub>	V <sub>DD</sub> =100V, I <sub>D</sub> =5A, V <sub>GS</sub> =10V	--	2	--	nC
Gate-Source Charge	Q <sub>gs</sub>		--	1	--	nC
Gate-Drain Charge	Q <sub>gd</sub>		--	1.2	--	nC
<b>Source-Drain Diode Characteristics</b>						
Diode Forward Voltage <sup>Note3</sup>	V <sub>SD</sub>	V <sub>GS</sub> =0V, I <sub>S</sub> =5A	--	--	1.5	V
Diode Forward Current <sup>Note2</sup>	I <sub>S</sub>		--	--	5	A

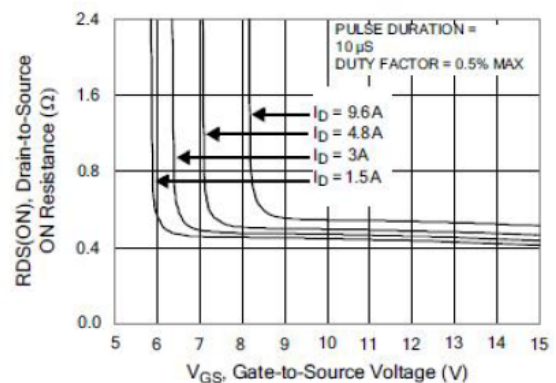
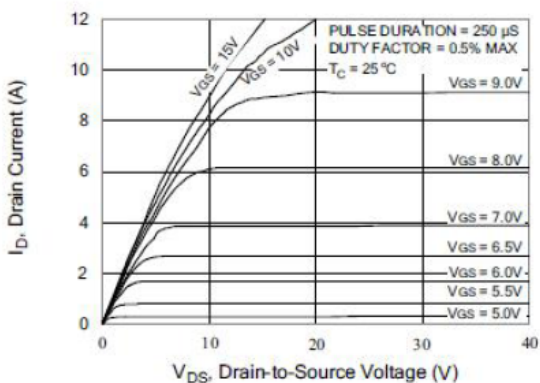
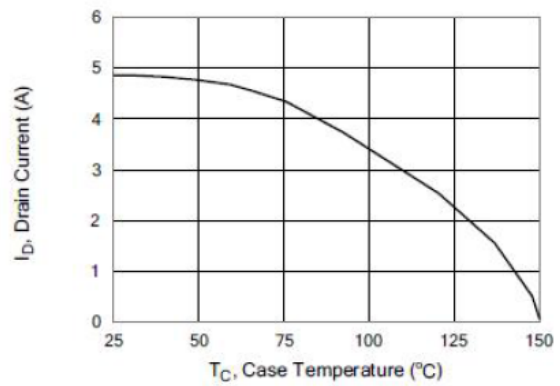
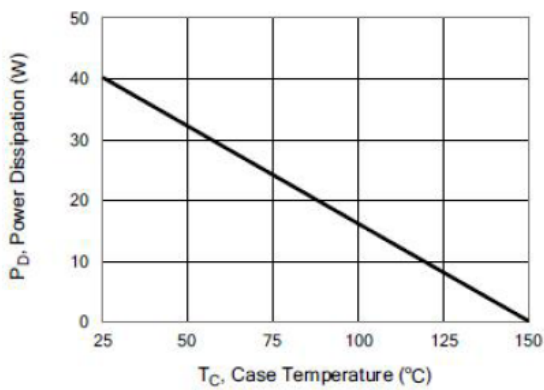
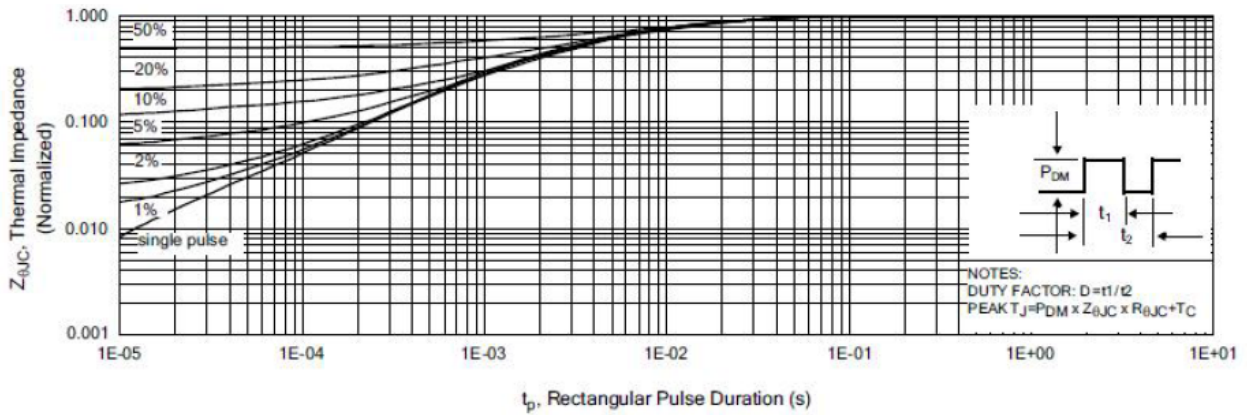
- Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.  
 2. Surface Mounted on FR4 Board, t ≤ 10 sec.  
 3. Pulse Test: Pulse width ≤ 300μs, duty cycle ≤ 2%.  
 4. E<sub>AS</sub> condition : L=10mH, I<sub>D</sub>=1A, start T<sub>J</sub>=25°C.



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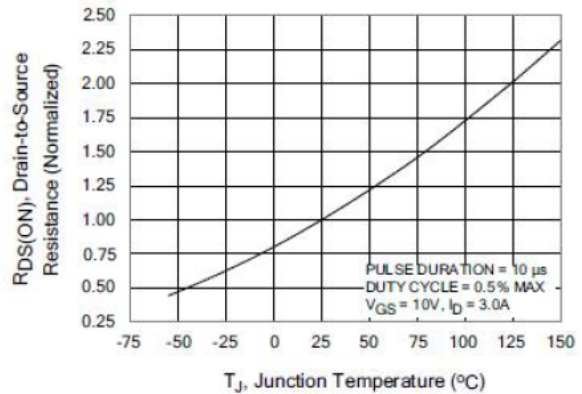
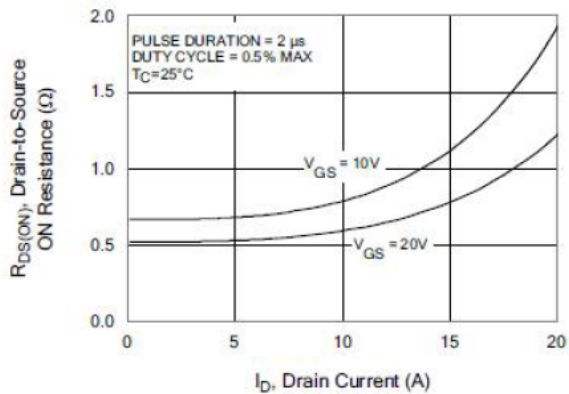
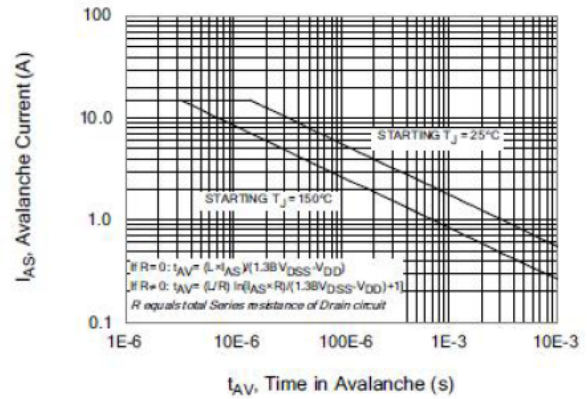
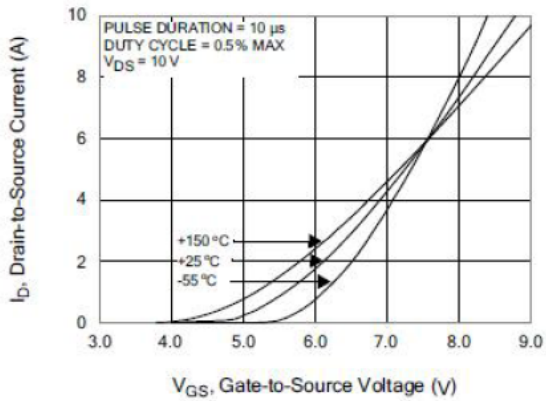
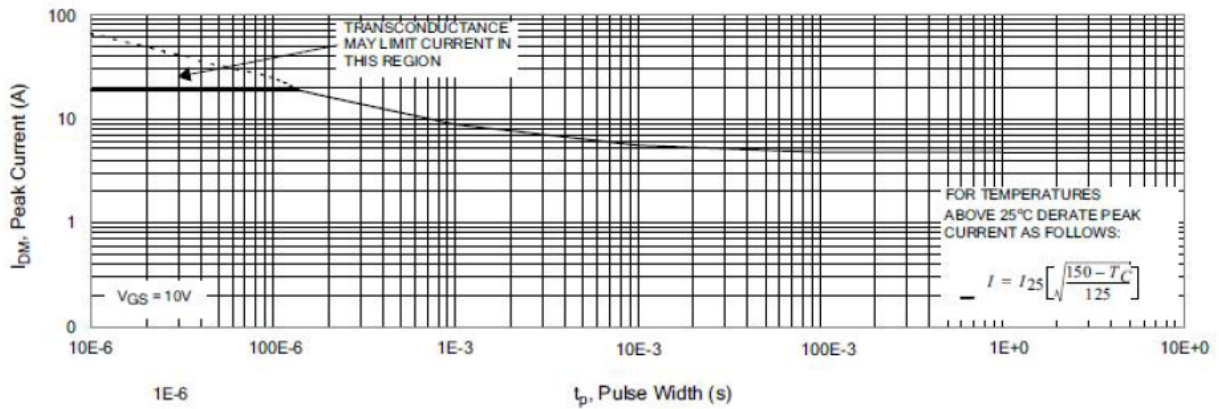
### Typical Characteristic Curves





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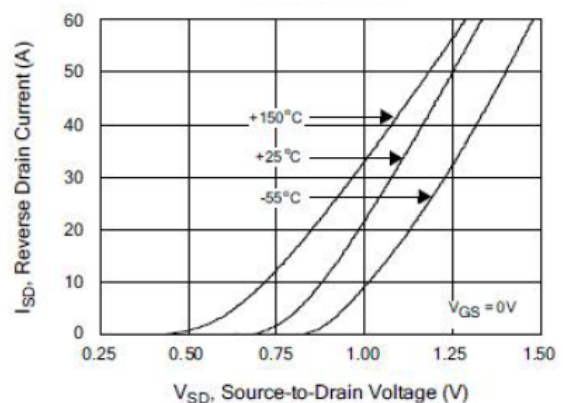
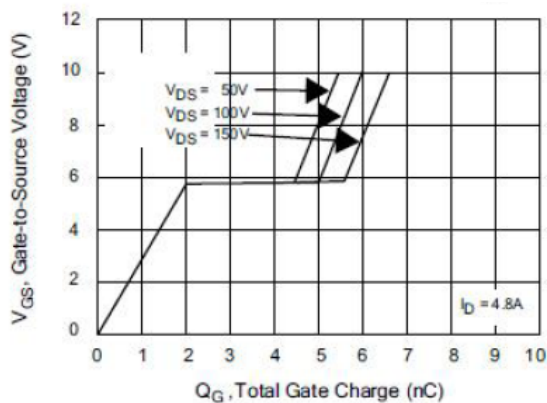
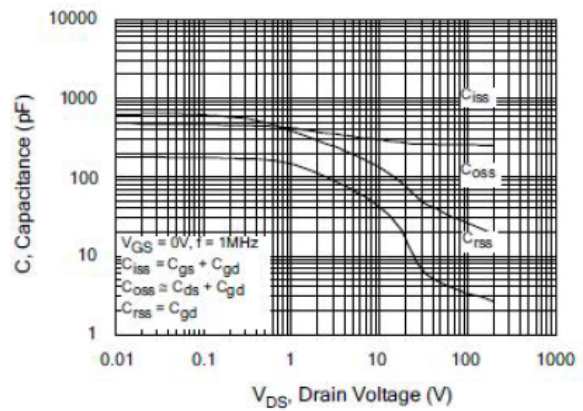
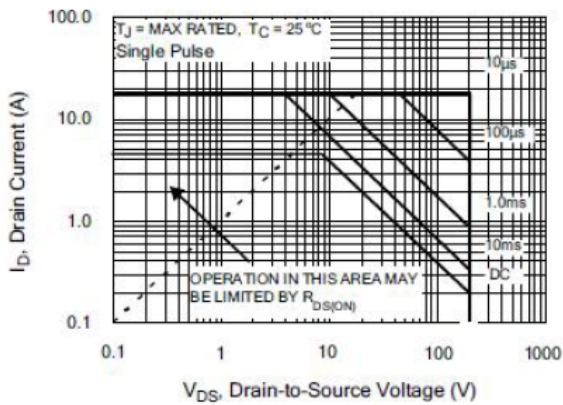
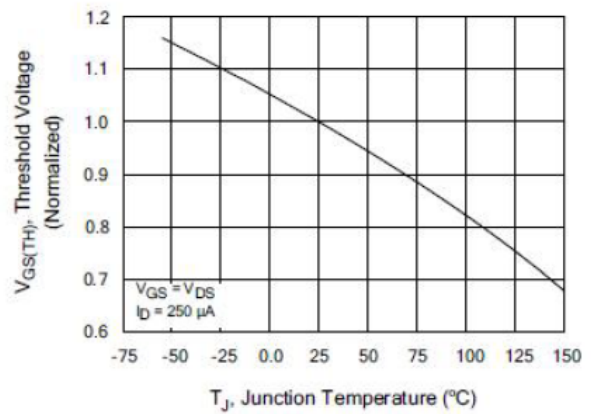
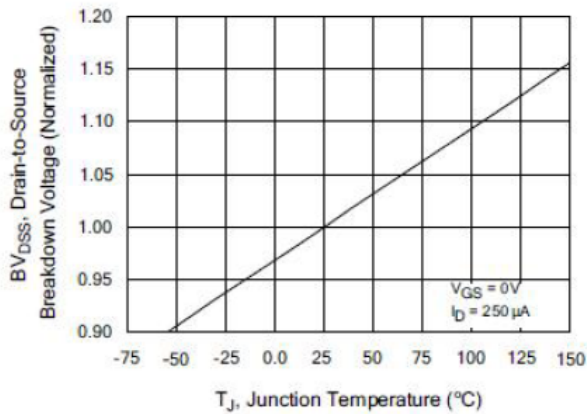
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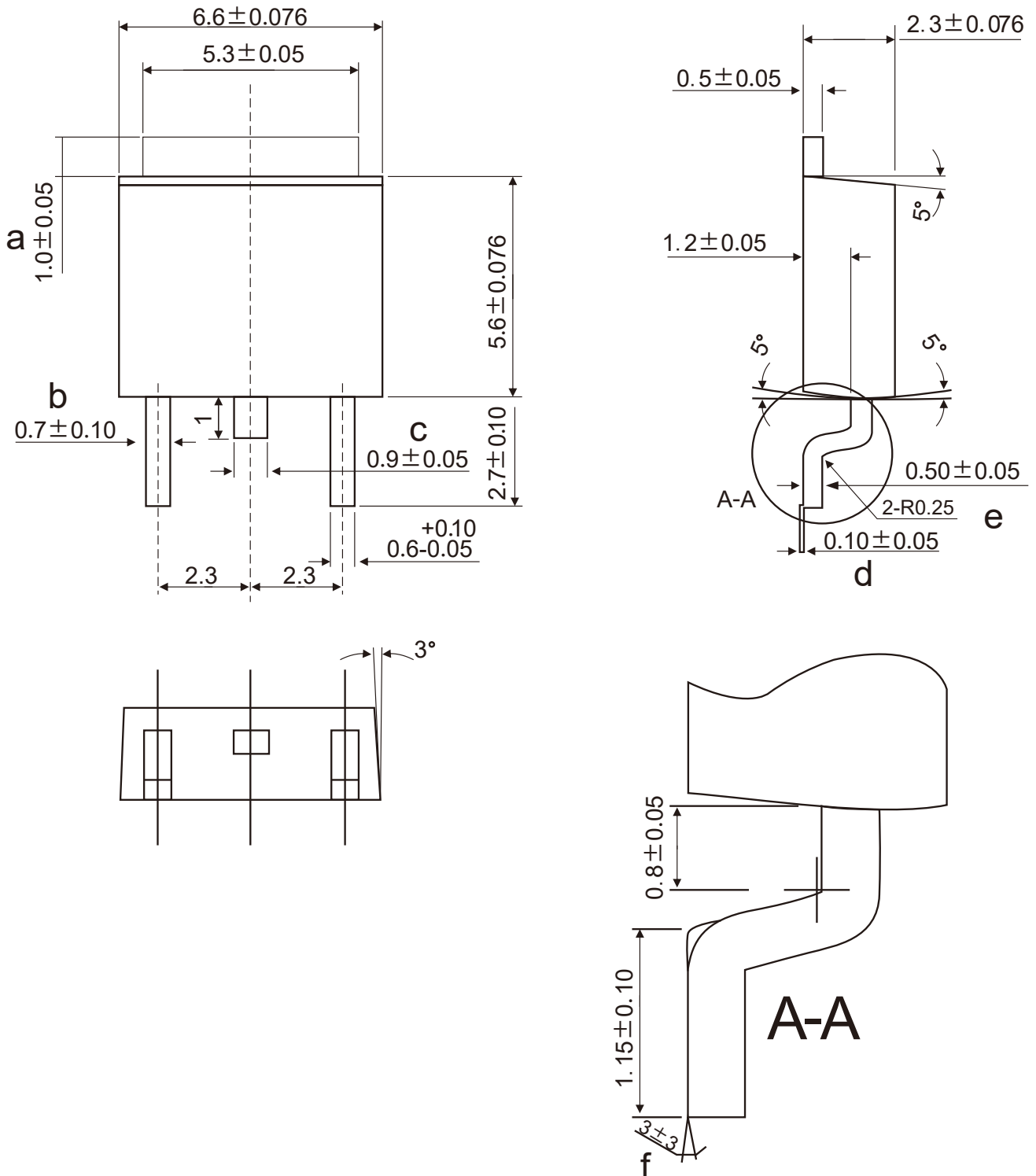
# PJM20H05NTE

## N-Channel Enhancement Mode Power MOSFET

### Package Outline

TO-252

Dimensions in mm



单击下面可查看定价，库存，交付和生命周期等信息

[>>PJSEMI\(平晶微\)](#)