



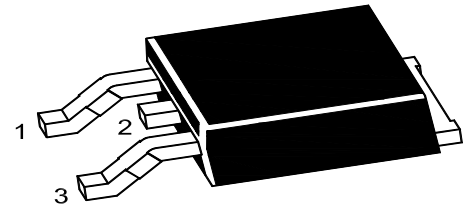
PJM10H10NTE

N-Channel Enhancement Mode Power MOSFET

Features

- Excellent package for good heat dissipation
- High density cell design for ultra low $R_{DS(on)}$
- $V_{DS} = 100V, I_D = 10A$
 $R_{DS(on)} < 120m\Omega @ V_{GS} = 10V$

TO-252

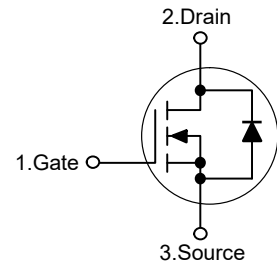


1. Gate 2. Drain 3. Source

Applications

- Power switching application
- Hard switched and high frequency circuits
- Uninterruptible power supply

Schematic Diagram



		Marking code										
		10H10: Product code										
	%\$<%\$ YW	Y: Year code	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
			G	H	J	K	A	B	C	D	E	F
	W: Week code	Weeks	1~26			27~52			53			
		code	A~Z			a~z			z			

Absolute Maximum Ratings

Ratings at 25°C case temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current-Continuous	I_D	10	A
Drain Current-Pulsed ^{Note1}	I_{DM}	40	A
Single pulse avalanche energy ^{Note2}	E_{AS}	4	mJ
Maximum Power Dissipation	P_D	24	W
Junction Temperature	T_J	175	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C

Thermal Characteristics

Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	6.3	°C/W
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Electrical Characteristics

(T_J=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	100	--	--	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =100V, V _{GS} =0V	--	--	1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V	--	--	±100	nA
Gate Threshold Voltage ^{Note3}	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1	1.5	2.5	V
Drain-Source On-Resistance ^{Note3}	R _{DS(on)}	V _{GS} =10V, I _D =8A	--	98	120	mΩ
		V _{GS} =4.5V, I _D =5A	--	100	140	mΩ
Forward Transconductance ^{Note3}	g _{FS}	V _{DS} =5V, I _D =3A	--	8	--	S
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =30V, V _{GS} =0V, f=1MHz	--	825	--	pF
Output Capacitance	C _{oss}		--	37.5	--	pF
Reverse Transfer Capacitance	C _{rss}		--	31.5	--	pF
Gate Resistance	R _g	V _{DS} =0V, V _{GS} =0V, f=1MHz	--	1	--	Ω
Switching Characteristics						
Turn-on Delay Time	t _{d(on)}	V _{DS} =50V, I _D =3A V _{GS} =10V, R _G =1.8Ω	--	7.5	--	nS
Turn-on Rise Time	t _r		--	6	--	nS
Turn-off Delay Time	t _{d(off)}		--	21	--	nS
Turn-off Fall Time	t _f		--	9	--	nS
Total Gate Charge	Q _g	V _{DS} =30V, I _D =2A, V _{GS} =10V	--	18	--	nC
Gate-Source Charge	Q _{gs}		--	2.5	--	nC
Gate-Drain Charge	Q _{gd}		--	4	--	nC
Source-Drain Diode Characteristics						
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =10A	--	0.9	1.2	V
Diode Forward Current	I _S		--	--	10	A

Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

2. E_{AS} condition : T_J=25°C, V_{DD}=50V, V_{GS}=10V, L=0.5mH, R_G=25Ω, I_{AS}=4A.

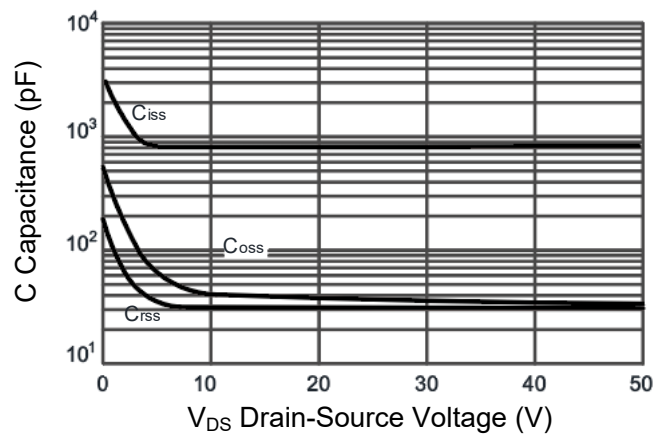
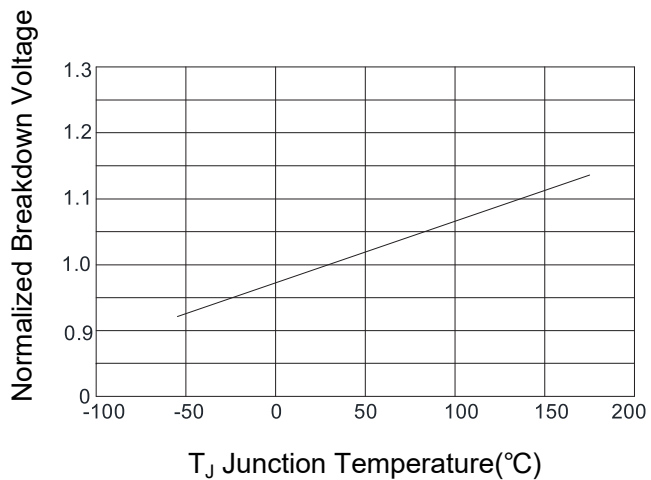
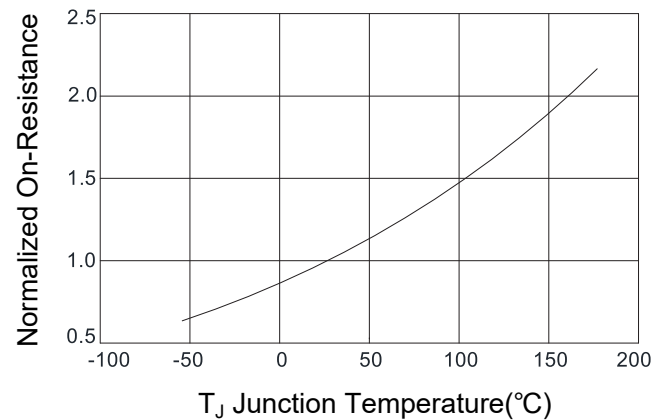
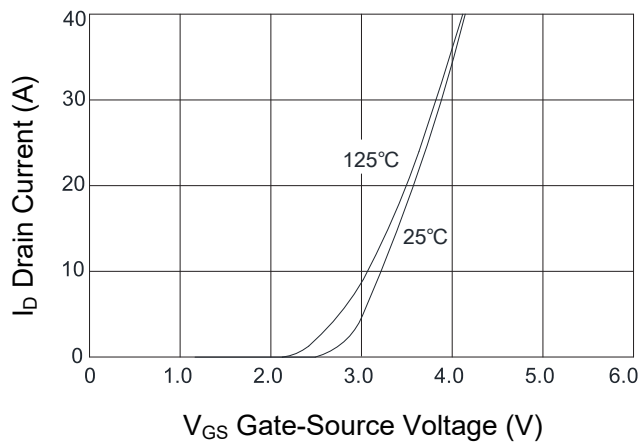
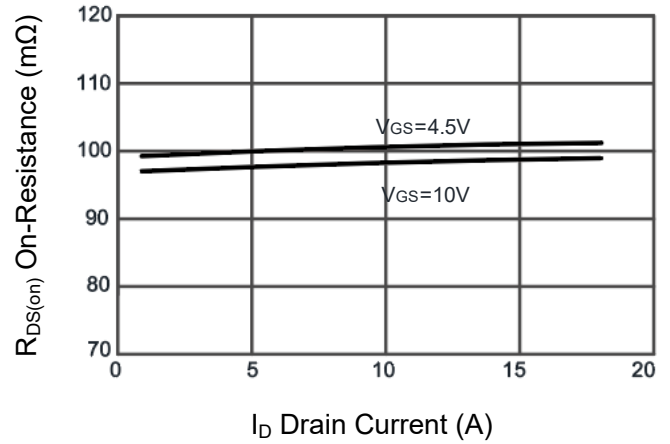
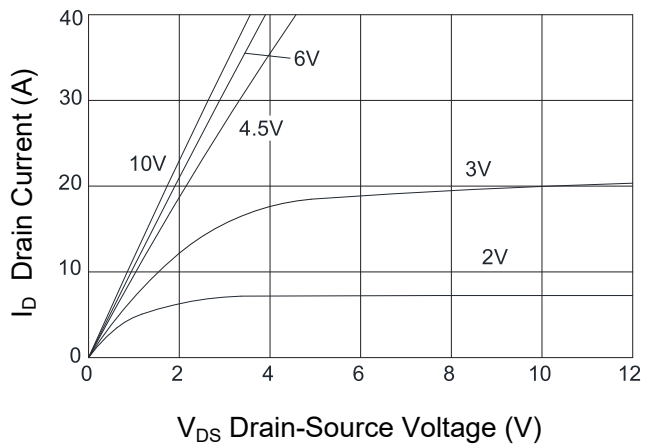
3. Pulse Test: Pulse width≤300μs, duty cycle≤0.5%.



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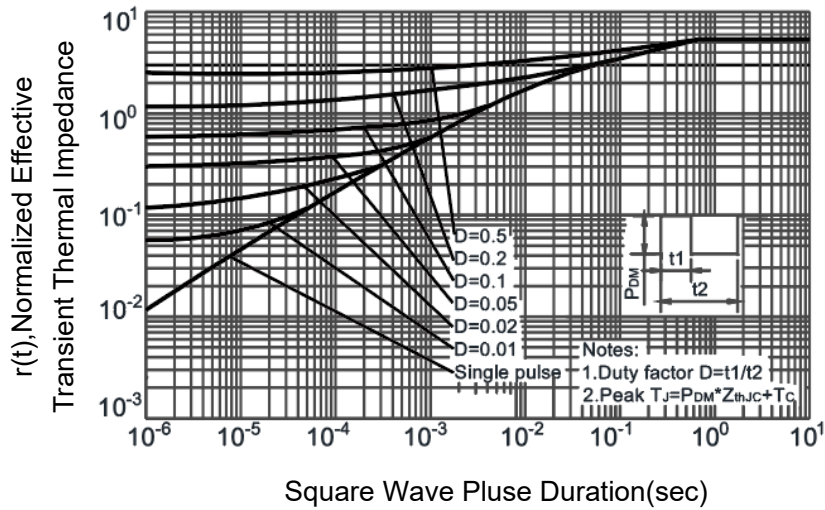
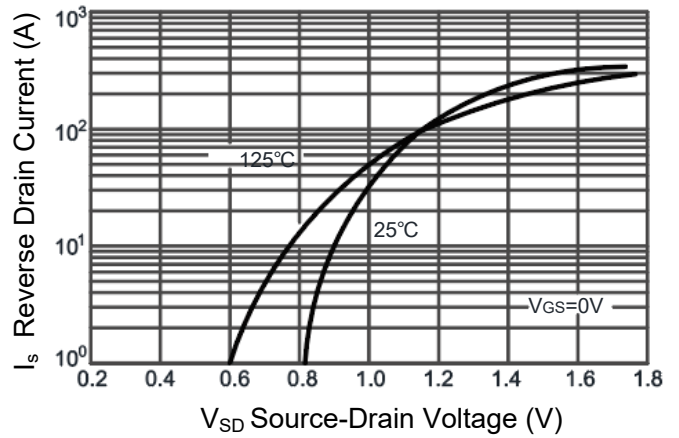
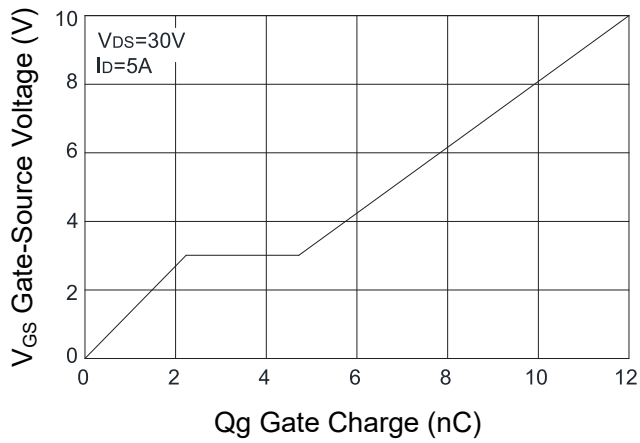
Typical Characteristic Curves





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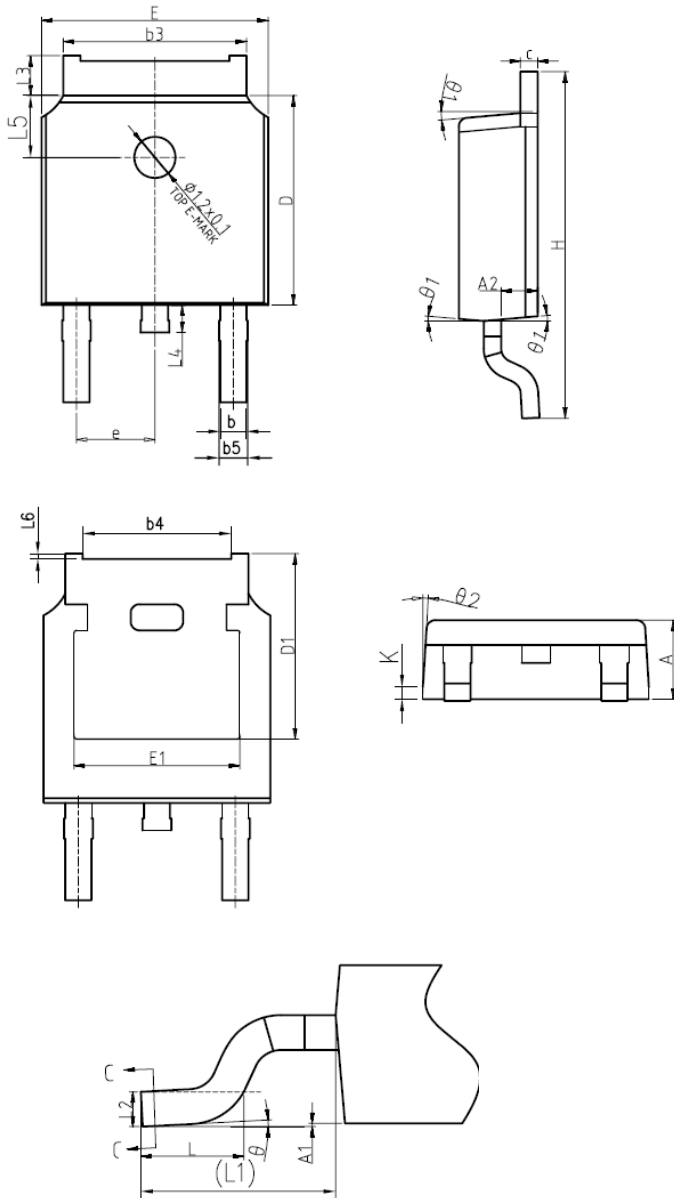
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Package Outline

TO-252

Dimensions in mm



Symbol	mm		
	Min.	Nom.	Max.
*A	2.20	2.30	2.38
*A1	0.00	--	0.10
A2	0.97	1.07	1.17
*b	0.72	0.78	0.85
b1	0.71	0.76	0.81
*b3	5.23	5.33	5.46
b4	4.27	4.32	4.37
b5	0.72	0.88	0.93
*c	0.47	0.53	0.58
c1	0.46	0.51	0.56
*D	6.00	6.10	6.20
D1	5.30REF		
*E	6.50	6.60	6.70
E1	4.70	4.83	4.92
*e	2.286BSC		
*H	9.90	10.10	10.30
L	1.40	1.50	1.70
L1	2.90REF		
L2	0.51BSC		
*L3	0.90	--	1.25
*L4	0.60	0.80	1.00
L5	1.70	1.80	1.90
L6	0	0.047	0.123
θ	0°	--	8°
*θ1	5°	7°	9°
θ2	5°	7°	9°
K	0.40REF		
带*为检验尺寸			

Ordering Information

Device	Package	Shipping
PJM10H10NTE	TO-252	2,500PCS/Reel&13inches