



PJM65H02CNTE

N-Channel Enhancement Mode Power MOSFET

Product Summary

- $V_{DS}=650V, I_D=2A$
- $R_{DS(on)}<5.3\Omega @V_{GS}=10V$

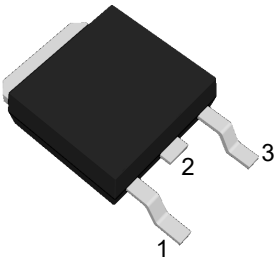
Features

- Advanced Trench Technology
- RoHS and Reach Compliant
- Halogen and Antimony Free
- Moisture Sensitivity Level 3

Application

- Load Switch
- PWM Application
- Power management

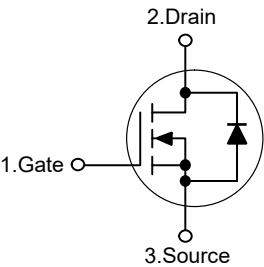
TO-252

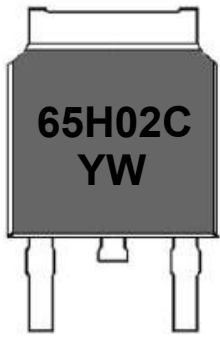


(Top View)

Pin	Description
1	Gate
2	Drain
3	Source

Schematic Diagram



	Marking code											
	65H02C YW	65H02C: Product code										
		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	



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Absolute Maximum Ratings

Ratings at 25°C case temperature unless otherwise specified.

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	650	V
Gate-Source Voltage		V_{GS}	± 30	V
Drain Current-Continuous	$T_C = 25^\circ\text{C}$	I_D	2	A
Drain Current-Pulsed ^{Note1}		I_{DM}	8	A
Single Pulse Avalanche Energy ^{Note2}		E_{AS}	31	mJ
Maximum Power Dissipation	$T_C = 25^\circ\text{C}$	P_D	35	W
Junction Temperature		T_J	150	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-55 to +150	$^\circ\text{C}$

Thermal Characteristics

Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	3.6	$^\circ\text{C/W}$
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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	650	--	--	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =650V,V _{GS} =0V	--	--	1	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} =±30V,V _{DS} =0V	--	--	±100	nA
Gate Threshold Voltage ^{Note4}	V _{GS(th)}	V _{DS} =V _{GS} ,I _D =250μA	2.0	--	4.0	V
Drain-Source On-Resistance ^{Note4}	R _{DS(on)}	V _{GS} =10V,I _D =1A	--	4.4	5.3	Ω
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =25V,V _{GS} =0V,f=1MHz	--	296	--	pF
Output Capacitance	C _{oss}		--	34	--	pF
Reverse Transfer Capacitance	C _{rss}		--	7	--	pF
Total Gate Charge	Q _g	V _{DS} =520V, I _D =2A, V _{GS} =10V	--	9.5	--	nC
Gate-Source Charge	Q _{gs}		--	1.5	--	nC
Gate-Drain Charge	Q _{gd}		--	4.9	--	nC
Switching Characteristics						
Turn-on Delay Time	t _{d(on)}	V _{DD} =325V, I _D =2A, R _{GEN} =10Ω	--	11	--	nS
Turn-on Rise Time	t _r		--	13	--	nS
Turn-off Delay Time	t _{d(off)}		--	29	--	nS
Turn-off Fall Time	t _f		--	12	--	nS
Source-Drain Diode Characteristics						
Diode Forward Voltage	V _{SD}	V _{GS} =0V,I _S =2A	--	--	1.4	V
Diode Forward Current	I _S		--	--	2	A

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

2. EAS condition: T_J=25°C, V_{DD}=100V, V_G=10V, L=10mH, I_{AS}=2.5A

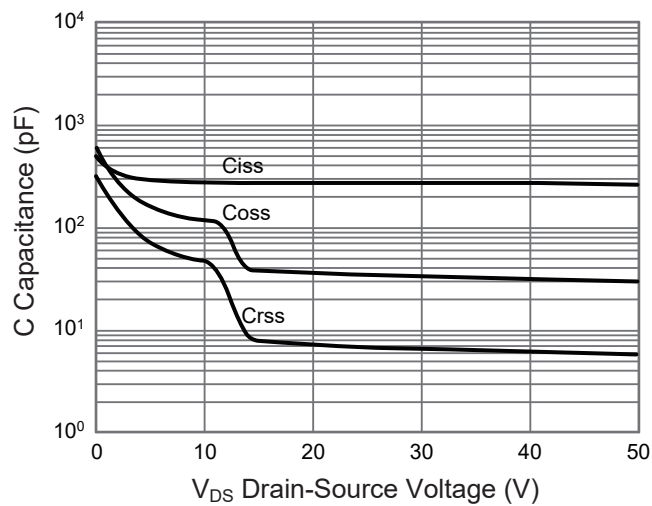
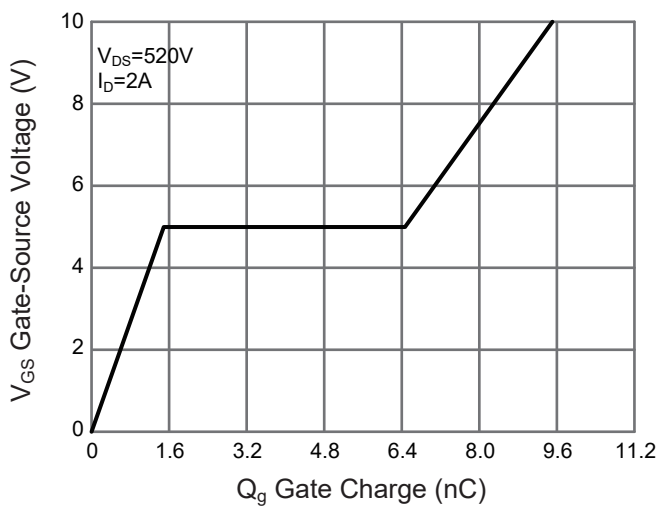
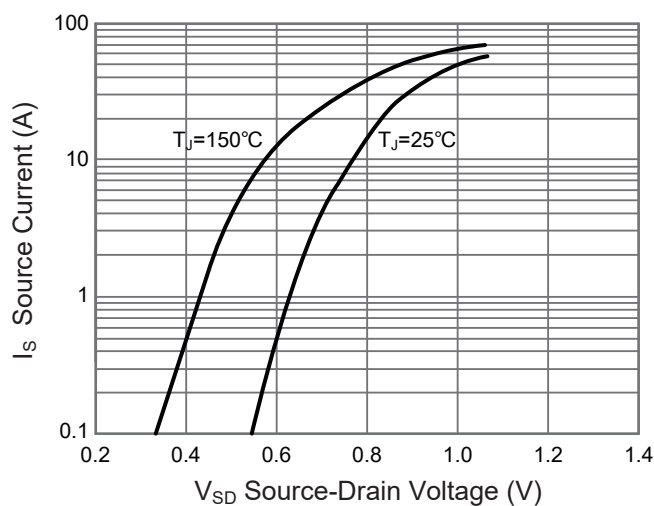
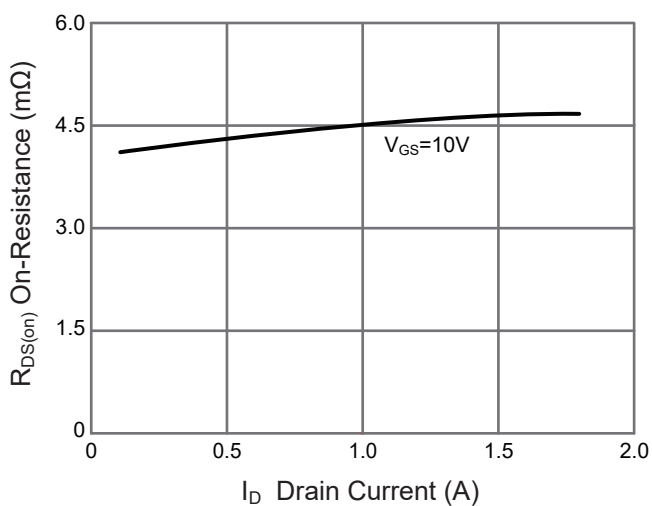
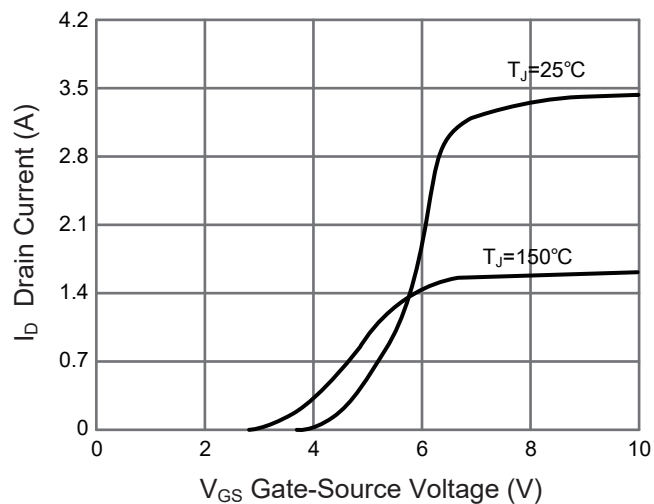
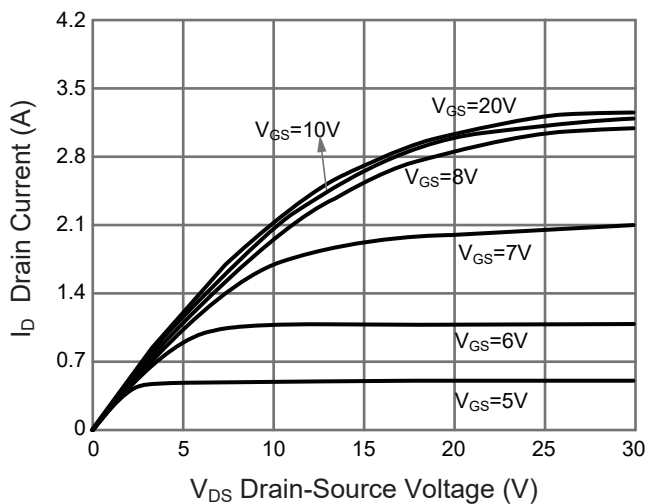
3. Pulse Test: Pulse Width≤300μs, Duty Cycles≤1%



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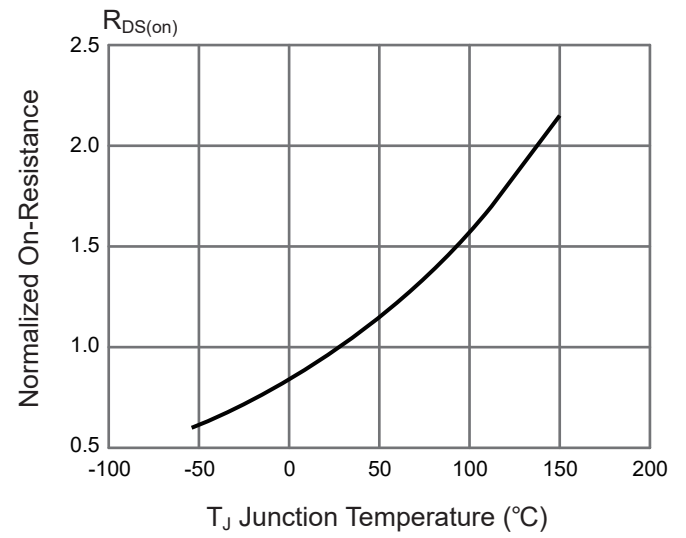
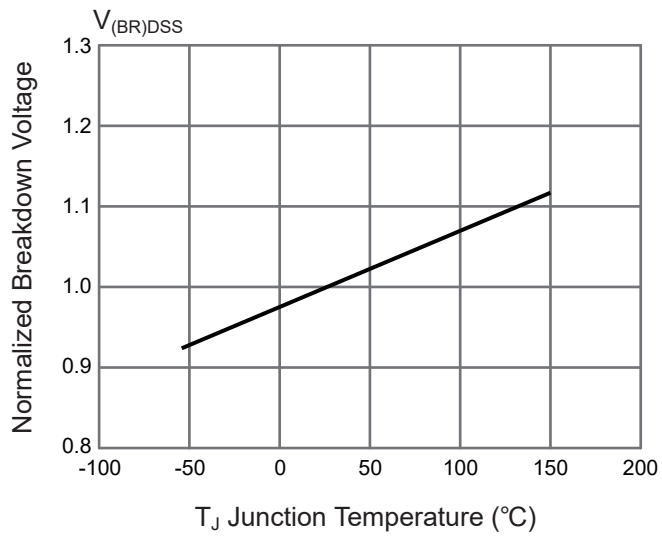
Typical Characteristic Curves





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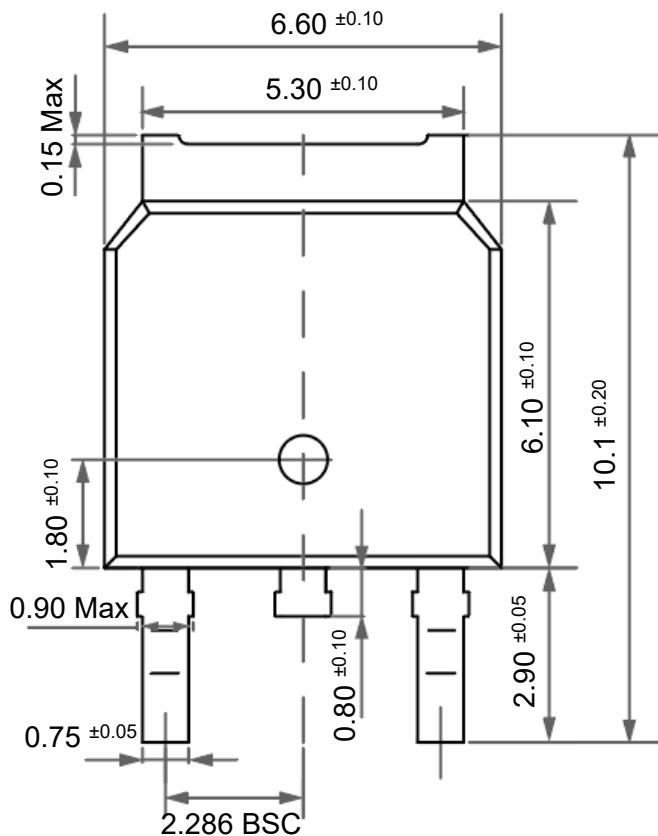
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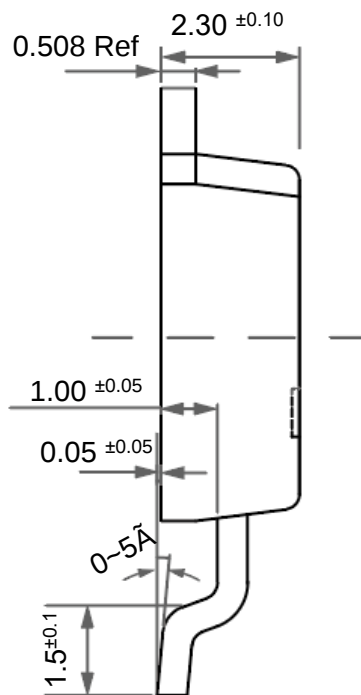
Package Outline

TO-252

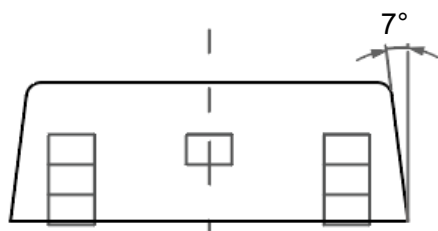
Dimensions in mm



Front View



Side View



Bottom View

Ordering Information

Device	Package	Shipping
PJM65H02CNTE	TO-252	2,500PCS/Reel&13inches