



PJM65H02CNTE

N-Channel Enhancement Mode Power MOSFET

Product Summary

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

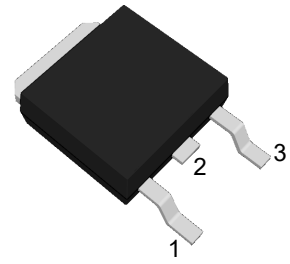
Features

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

Application

- Load Switch
- PWM Application
- Power management

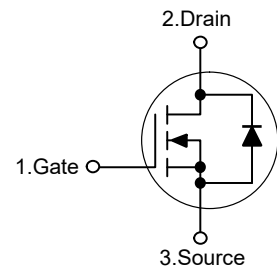
TO-252

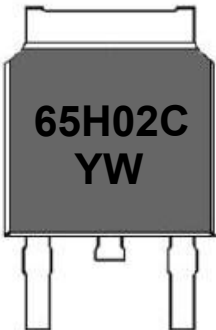


(Top View)

Pin	Description
1	Gate
2	Drain
3	Source

Schematic Diagram



		Marking code										
		65H02C: Product code										
	65H02C 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			



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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	I_D	2	A
	$T_C = 25^\circ\text{C}$		
Drain Current-Pulsed ^{Note1}	I_{DM}	8	A
Single Pulse Avalanche Energy ^{Note2}	E_{AS}	31	mJ
Maximum Power Dissipation	P_D	35	W
	$T_C = 25^\circ\text{C}$		
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Thermal Characteristics

Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	3.6	°C/W
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Electrical Characteristics

($T_J=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	650	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V, V_{GS}=0V$	--	--	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 30V, V_{DS}=0V$	--	--	± 100	nA
Gate Threshold Voltage ^{Note4}	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	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}	$V_{DS}=25V, V_{GS}=0V, f=1\text{MHz}$	--	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	$t_{d(on)}$	$V_{DD}=325V, I_D=2A,$ $R_{GEN}=10\Omega$	--	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: $T_J=25^{\circ}\text{C}, V_{DD}=100V, V_G=10V, L=10\text{mH}, I_{AS}=2.5A$

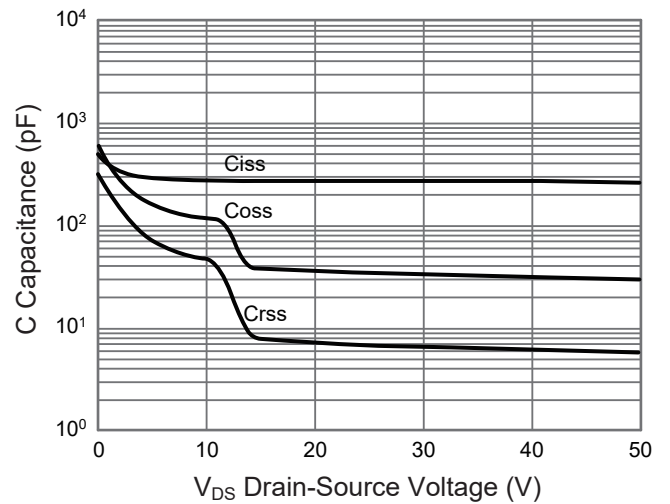
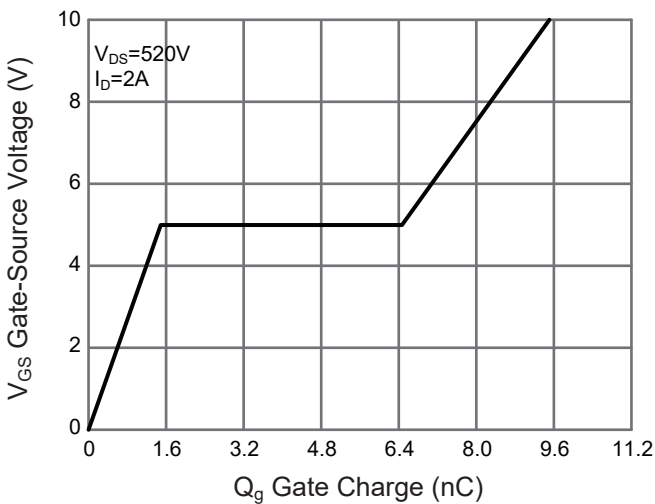
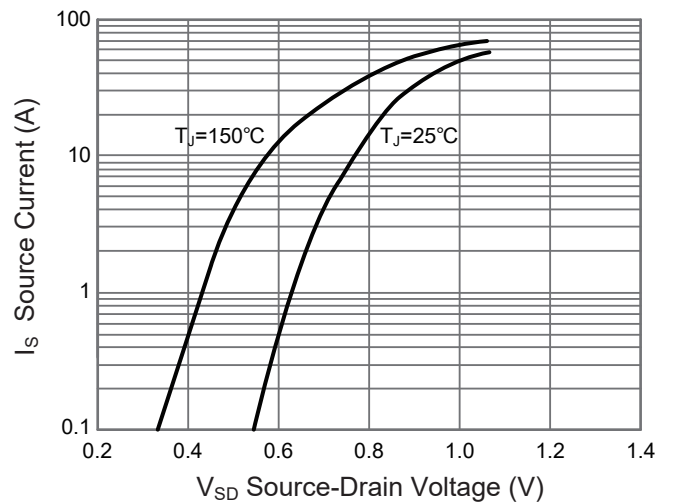
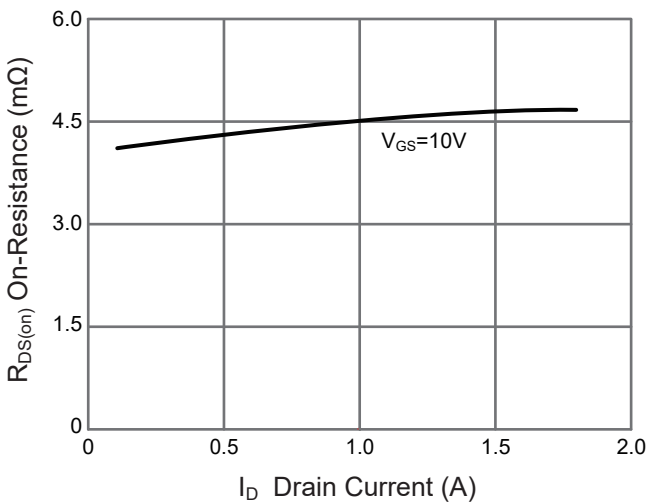
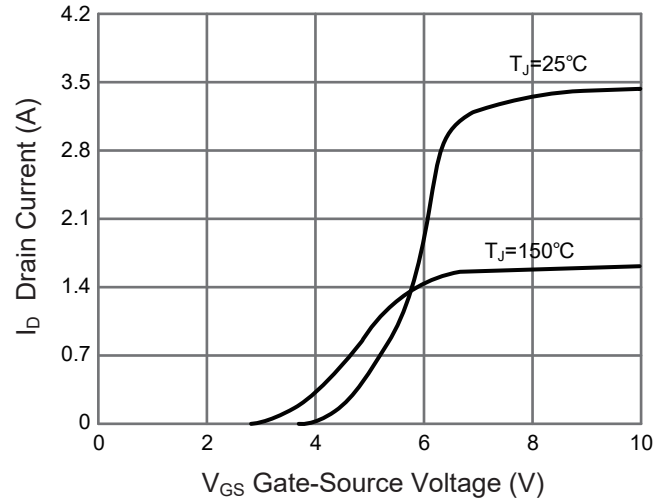
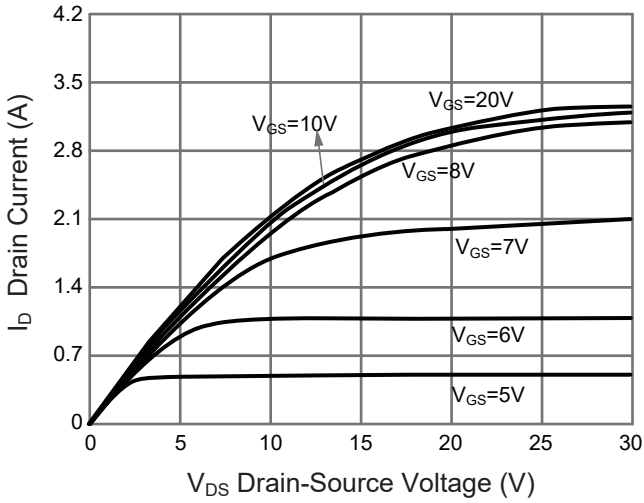
3. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 1\%$



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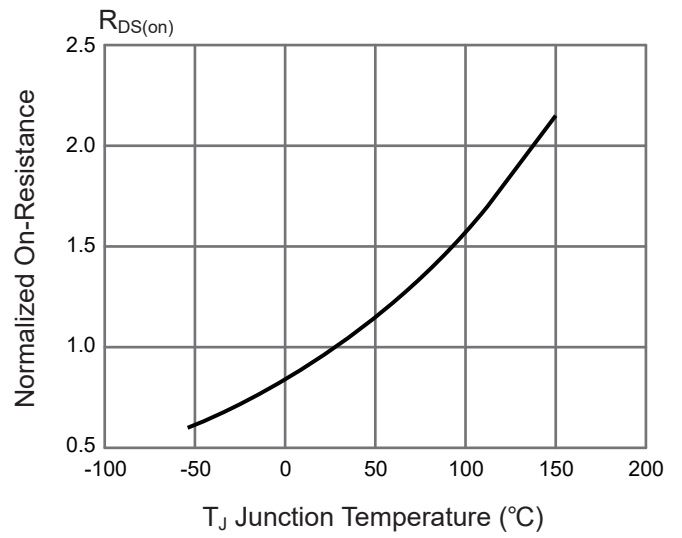
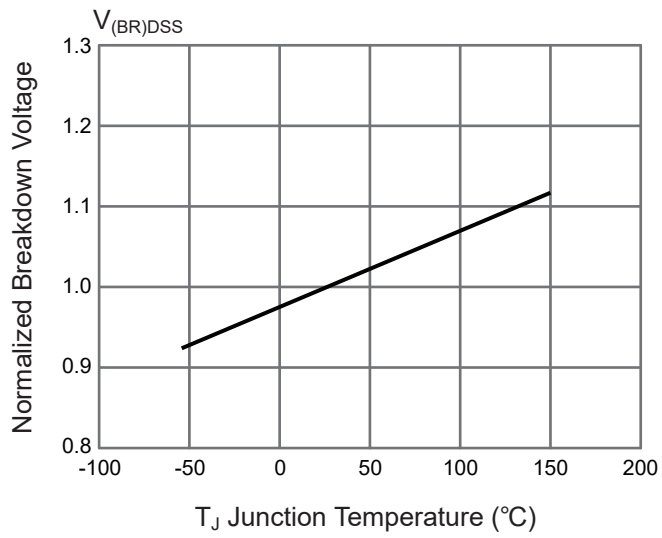
Typical Characteristic Curves





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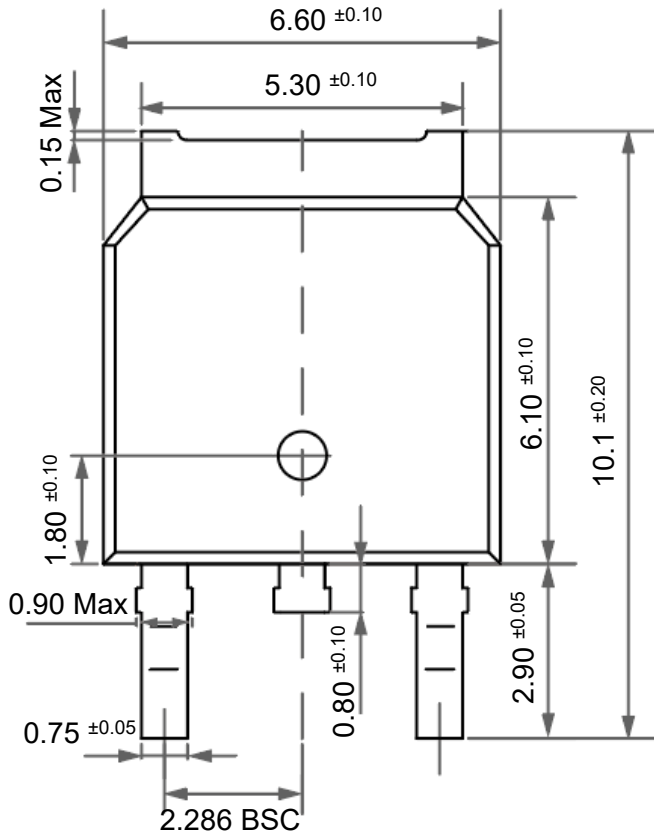
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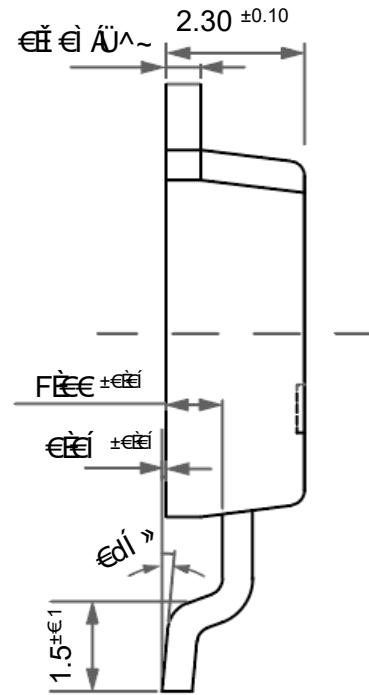
Package Outline

TO-252

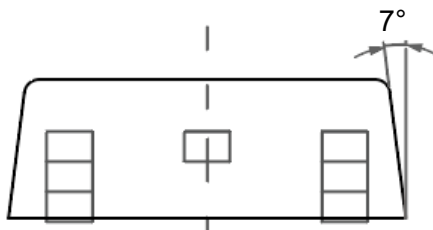
Dimensions in mm



Front View



Side View



Bottom View

Ordering Information

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

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