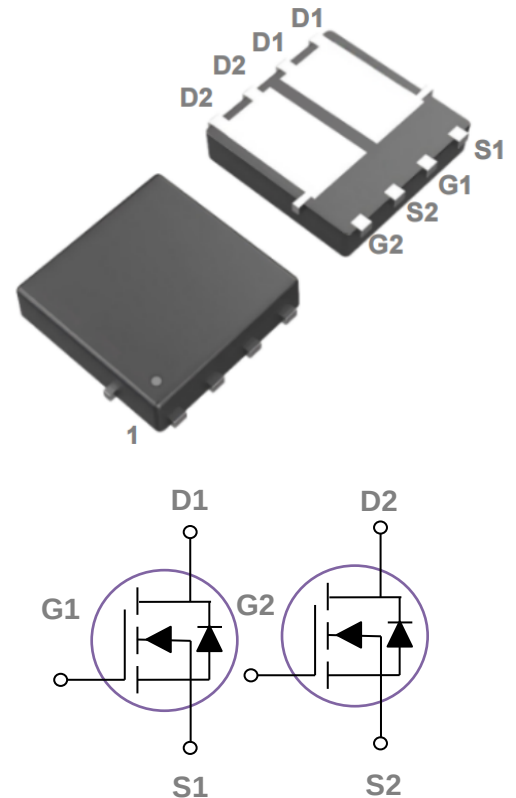


Description:

This Dual N-Channel MOSFET uses advanced trench technology to minimize on-state resistance, provide superior switching performance, and withstand high energy pulse in the avalanche and commutation mode. These devices are well suited for high efficiency fast switching applications.

Features:

- 1) $V_{DS}=30V, I_D=35A, R_{DS(ON)} < 10m\Omega @ V_{GS}=10V$
- 2) Improved dv/dt capability
- 3) Fast switching
- 4) 100% EAS Guaranteed
- 5) Green Device Available.



Package Marking and Ordering Information:

Part NO.	Marking	Package	Reel Size	Tape width	Quantity
DOZ35DN03	35DN03	DFN3*3-8D	13inch	12mm	5000PCS

Absolute Maximum Ratings: ($T_C=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current- $T_C=25^{\circ}C$	35	A
	Continuous Drain Current- $T_C=100^{\circ}C$	20	
I_{DM}	Pulsed Drain Current ^{note1}	120	A
E_{AS}	Single Pulsed Avalanche Energy ^{note2}	20	mJ
P_D	Power Dissipation	22	W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	$^{\circ}C$

Thermal Characteristics:

Symbol	Parameter	Max	Units
$R_{\theta JC}$	Thermal Resistance, Junction to Case	5.68	$^{\circ}C/W$

Electrical Characteristics: (T_J=25℃ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250 μ A	30	---	---	V
I _{DSS}	Drain-Source Leakage Current	V _{GS} =0V, V _{DS} =30V	---	---	1	μ A
I _{GSS}	Gate-Source Leakage Current	V _{GS} =± 20V, V _{DS} =0V	---	---	± 100	nA
On Characteristics						
V _{GS(th)}	Gate Source Threshold Voltage	V _{GS} =V _{DS} , I _D =250 μ A	1	1.5	2.5	V
R _{DS(ON)}	Drain-Source On Resistance ^{note3}	V _{GS} =10V, I _D =20A	---	8.5	10	m Ω
		V _{GS} =4.5V, I _D =10A	---	13	16	
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{DS} =15V, V _{GS} =0V, f=1MHz	---	1005	---	pF
C _{oss}	Output Capacitance		---	140	---	
C _{rss}	Reverse Transfer Capacitance		---	116	---	
Switching Characteristics						
t _{d(on)}	Turn-On Delay Time	V _{DS} =15V , V _{GS} =10V R _{GEN} =3 Ω , I _D =20A	---	6	---	ns
t _r	Rise Time		---	5	---	ns
t _{d(off)}	Turn-Off Delay Time		---	25	---	ns
t _f	Fall Time		---	7	---	ns
Q _g	Total Gate Charge	V _{DS} =15V , V _{GS} =10V , I _D =10A	---	19	---	nC
Q _{gs}	Gate-Source Charge		---	6.3	---	nC
Q _{gd}	Gate-Drain “Miller” Charge		---	4.5	---	nC
Drain-Source Diode Characteristics						
I _S	Contiuos Source Curent	VD=VG=0V	---	---	35	A
I _{SM}	Pulsed Source Curent	VD=VG=0V	---	---	120	A
V _{SD}	Source-Drain Diode Forward Voltage	V _{GS} =0V , I _S =22A	---	---	1.2	V
t _{rr}	Reverse Recovery Time	I _F =10A , di/dt=100A/μs	---	7	---	nS
Q _{rr}	Reverse Recovery Charge		---	6.3	---	nC

Notes:

1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
2. EAS condition: $T_J=25^{\circ}\text{C}$, $V_{GS}=10\text{V}$, $R_G=25\ \Omega$, $L=0.5\text{mH}$, $I_{AS}=9.8\text{A}$
3. Pulse Test: Pulse Width $\leq 300\ \mu\text{s}$, Duty Cycle $\leq 0.5\%$

Typical Characteristics: ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

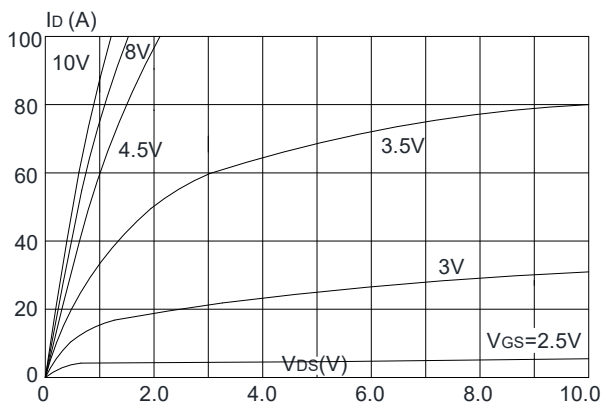


Figure 1: Output Characteristics

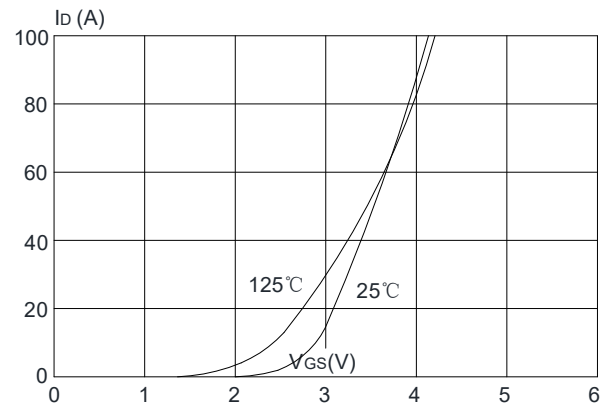


Figure 2: Typical Transfer Characteristics

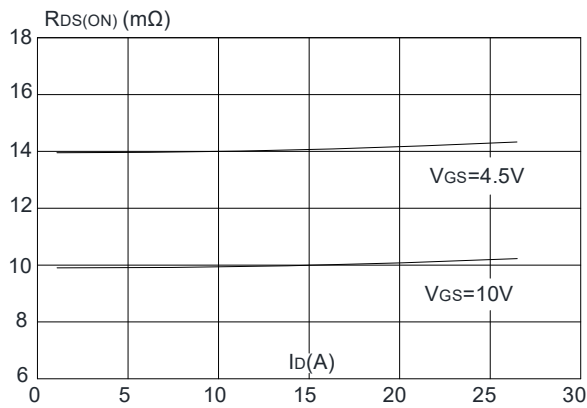


Figure 3: On-resistance vs. Drain Current

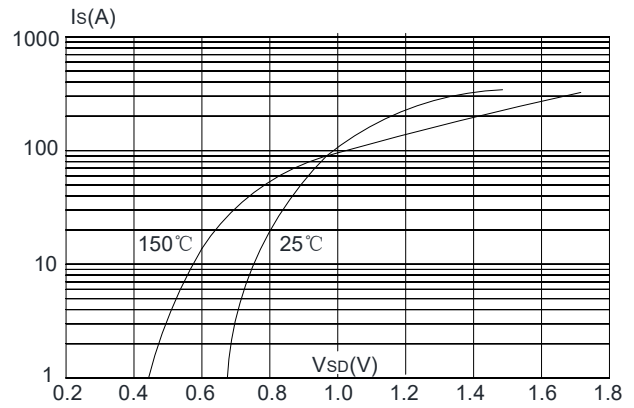


Figure 4: Body Diode Characteristics

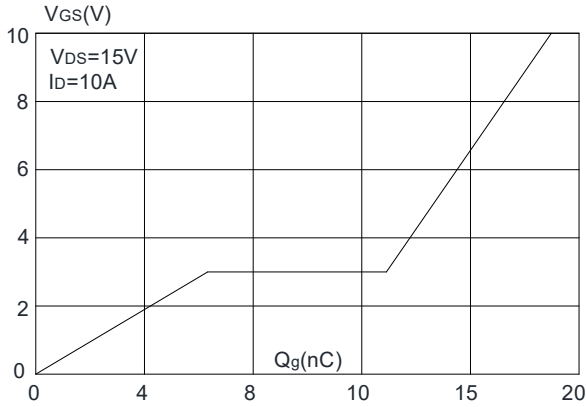


Figure 5: Gate Charge Characteristics

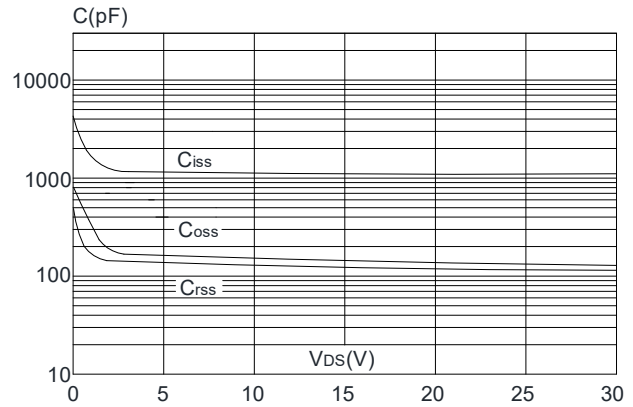


Figure 6: Capacitance Characteristics

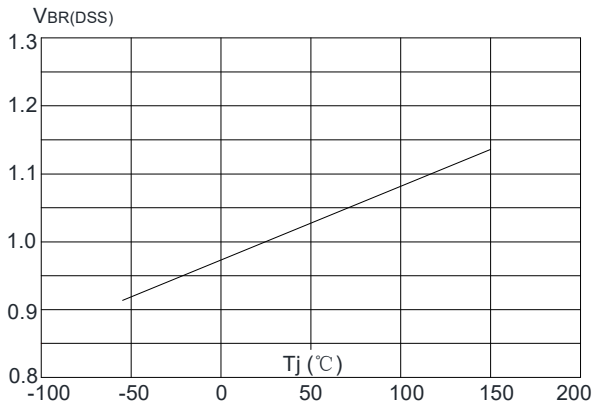


Figure 7: Normalized Breakdown Voltage vs. Junction Temperature

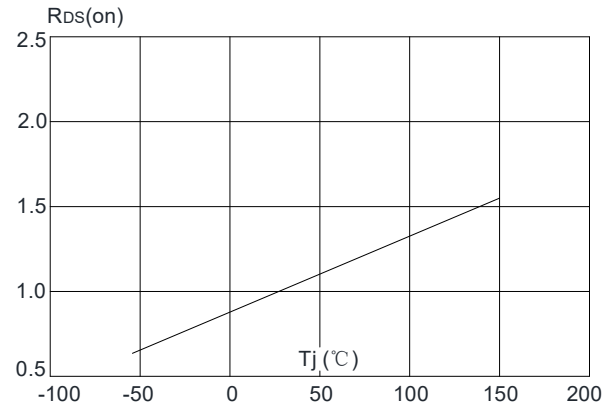


Figure 8: Normalized on Resistance vs. Junction Temperature

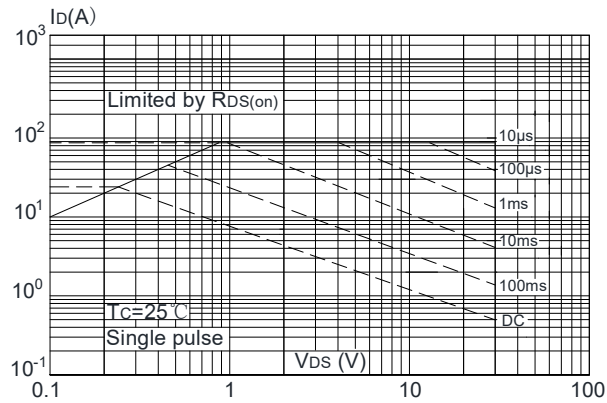


Figure 9: Maximum Safe Operating Area

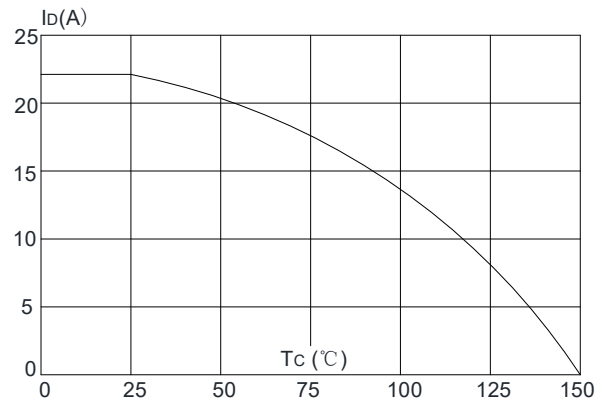


Figure 10: Maximum Continuous Drain Current vs. Case Temperature

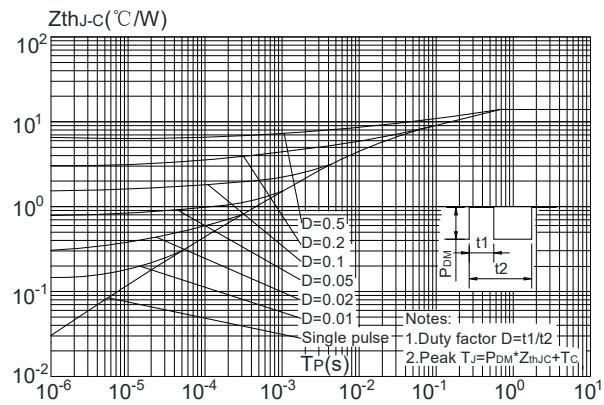
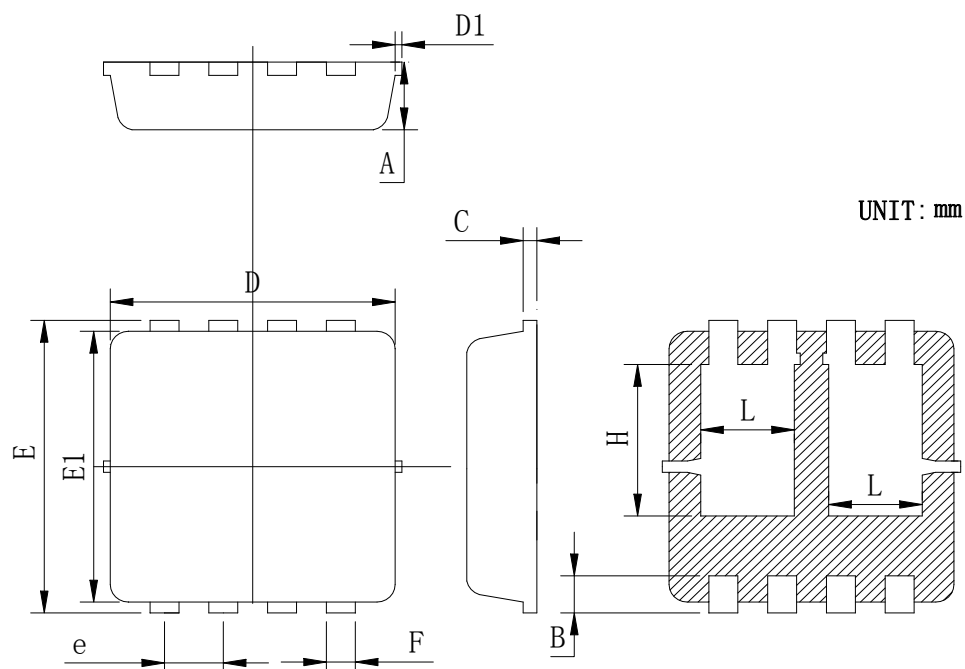


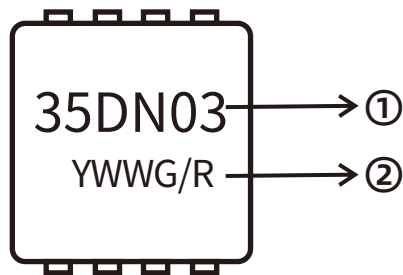
Figure.11: Maximum Effective Transient Thermal Impedance, Junction-to-Case

DFN3X3-8D Package Outline Data



Symbol	Min	Typ	Max
A	0.725	0.775	0.825
B	0.28	0.38	0.48
C	0.13	0.15	0.20
D	3.05	3.15	3.25
D1			0.10
E	3.25	3.35	3.45
E1	3.0	3.1	3.2
e	0.60	0.65	0.70
F	0.27	0.32	0.37
H	1.63	1.73	1.83
L	0.93	1.03	1.13

Marking Information



①: Part NO.

②: Date Code (YWWG / R)

Y: Year Code , last digit of the year

WW : Week Code (01-53)

G/R: G(Green) /R(Lead Free)

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