

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-100V	35mΩ@-10V	-25A
	45mΩ@-4.5V	

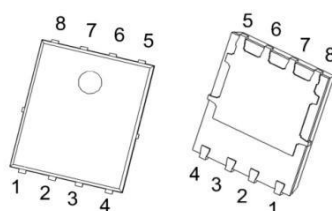
Feature

- VDS -100V
- ID -25A
- $R_{DS(ON)}$ (at VGS=10V) < 50 mohm
- Fast Switching

Applications

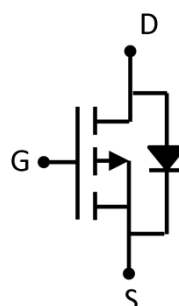
- Motor control
- Switching Regulators
- Isolated DC/DC convertor
- Alertor

Package

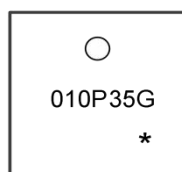


PDFNWB5X6-8L

Circuit diagram



Marking



010P35G =Device Code

* =Month Code

**Absolute maximum ratings (Ta=25°C unless otherwise noted)**

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	-100	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current – Continuous	I_D	-25	A
Drain Current – Pulsed	I_{DM}	-100	A
Power Dissipation (TC=25°C)	P_D	100	W
Thermal Resistance Junction to Case	$R_{\theta JC}$	1.25	°C/W
Storage Temperature Range	T_{STG}	-50 to 150	°C
Operating Junction Temperature Range	T_J	-50 to 150	°C

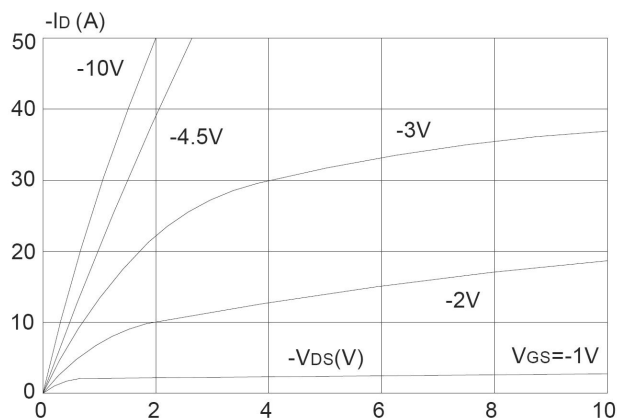
Electrical characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	B _V DSS	VGS=0V , ID=-250uA	-100	---	---	V
Drain-Source Leakage Current	I _D SS	VDS=-100V , VGS=0V	---	---	-1	uA
Gate-Source Leakage Current	I _G SS	VGS=± 20V , VDS=0V	---	---	± 100	nA
Gate Threshold Voltage	V _{GS} (th)	VGS=VDS , ID =-250uA	-1	-1.6	-2.5	V
Static Drain-Source On-Resistance	R _{DS} (ON)	VGS=-10V , ID=-15A	---	35	50	mΩ
		VGS=-4.5V , ID=-10A	---	45	65	mΩ
Dynamic Characteristics						
Total Gate Charge	Q _g	VGS=-10V, VDS=-50V, ID=-5A	---	41	---	nC
Gate-Source Charge	Q _{gs}		---	8.1	---	
Gate-Drain Charge	Q _{gd}		---	8.2	---	
Turn-On Delay Time	T _d (on)	VGS=-10V, VDD=-50V, ID=-5A, RGEN=6Ω	---	13	---	ns
Rise Time	T _r		---	37	---	
Turn-Off Delay Time	T _d (off)		---	101	---	
Fall Time	T _f		---	104	---	
Input Capacitance	C _{iss}	VDS=-50V, VGS=0V, f=1MHZ	---	2205	---	pF
Output Capacitance	C _{oss}		---	197	---	
Reverse Transfer Capacitance	C _{rss}		---	14	---	
Drain-Source Body Diode Characteristics						
Continuous Source Current	I _s	VG=VD=0V , Force Current	---	---	-30	A
Diode Forward Voltage	V _{SD}	VGS=0V , I _S =-1A	---	---	-1.2	V

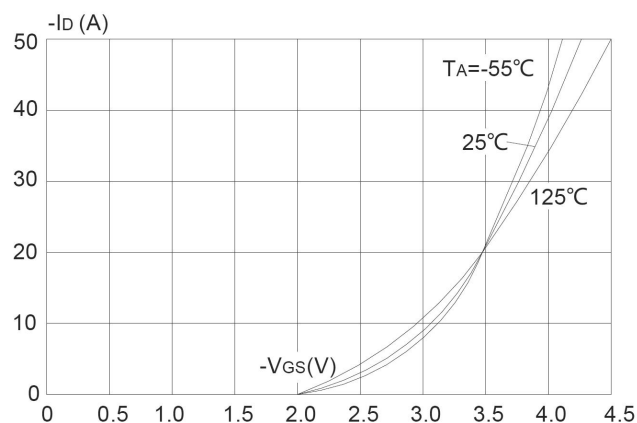


Typical Characteristics

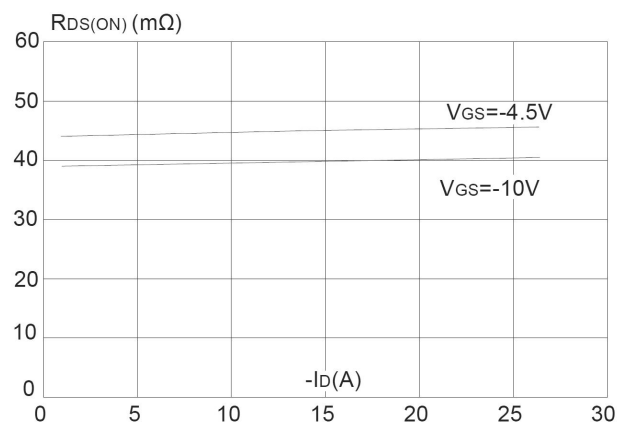
Output Characteristics



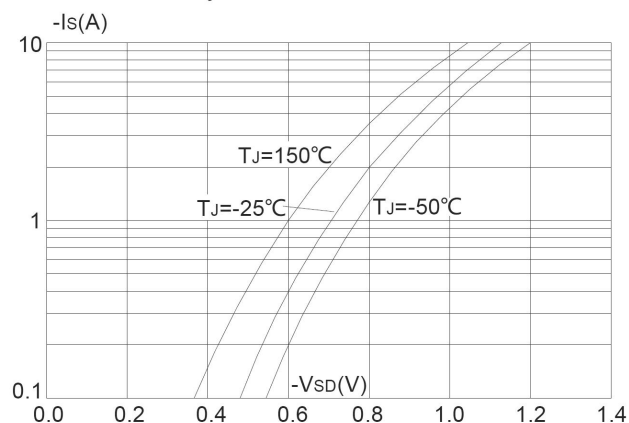
Typical Transfer Characteristics



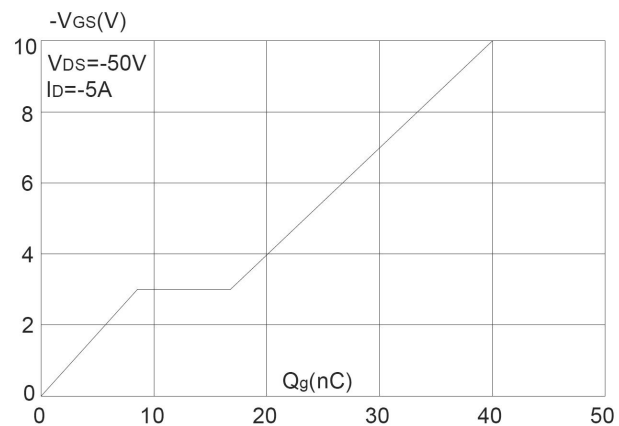
On-resistance vs. Drain Current



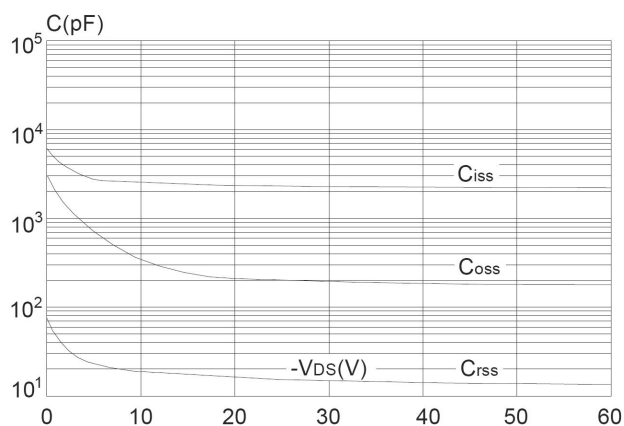
Body Diode Characteristics



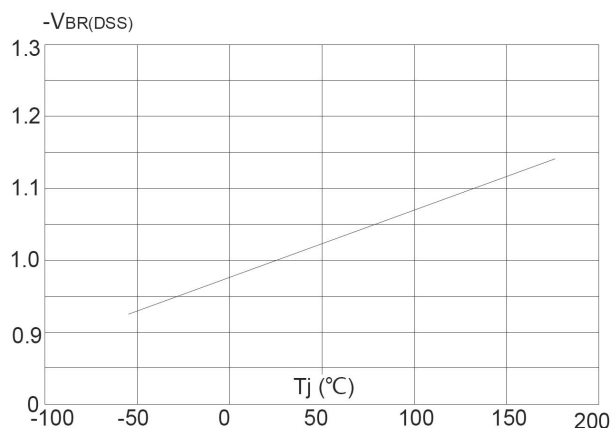
Gate Charge Characteristics



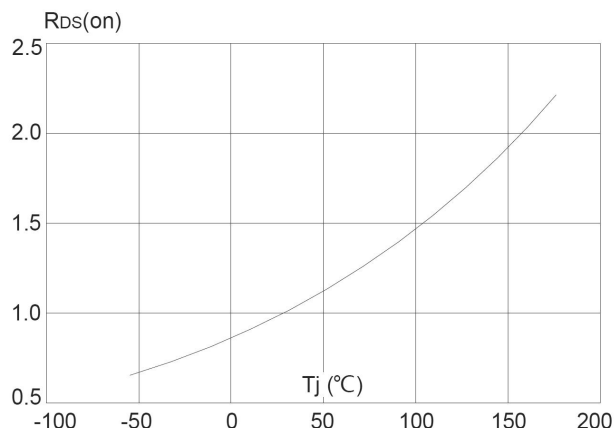
Capacitance Characteristics



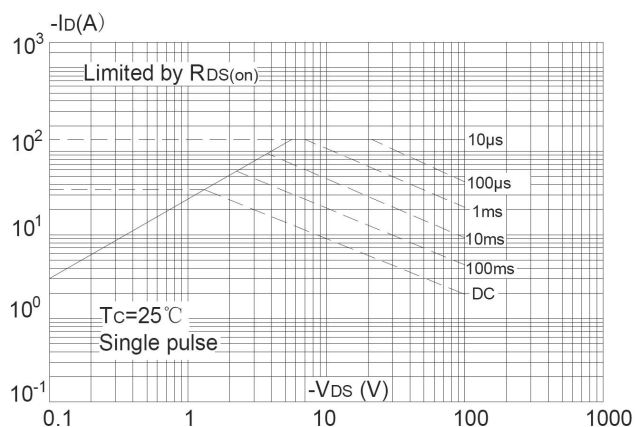
Normalized Breakdown Voltage vs. Junction Temperature



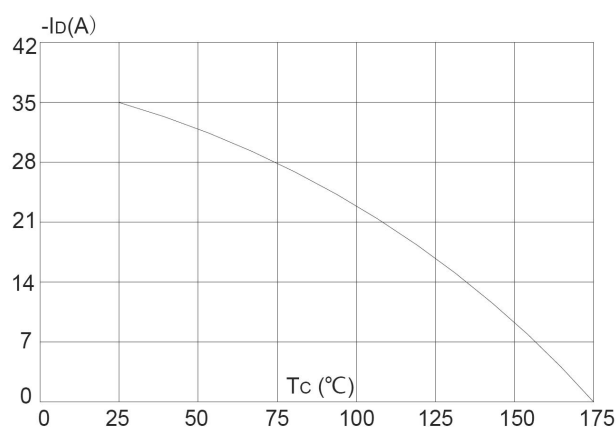
Normalized on Resistance vs. Junction Temperature



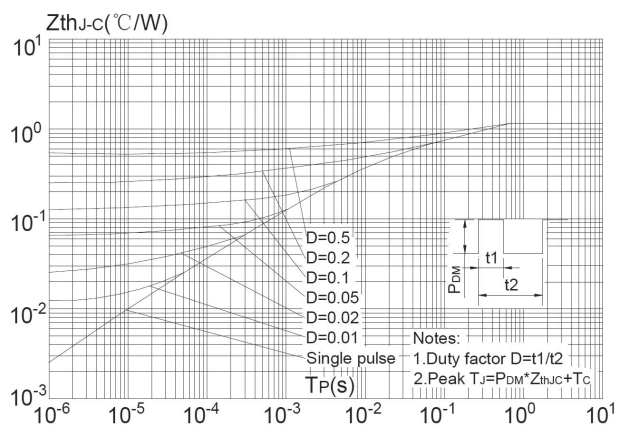
Maximum Safe Operating Area



Maximum Continuous Drain Current vs. Case Temperature

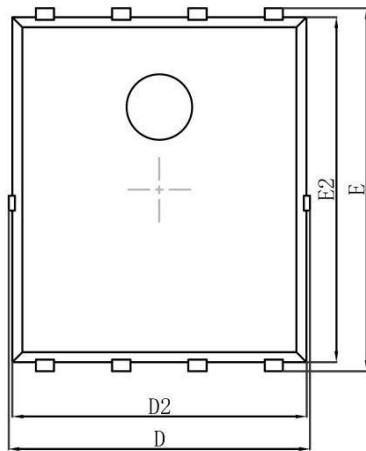
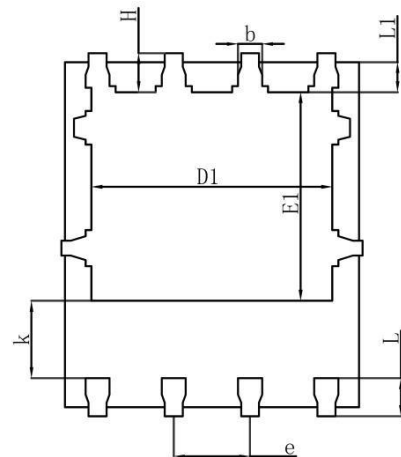
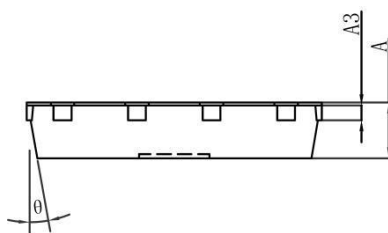


Maximum Effective Transient Thermal Impedance, Junction-to-Case





PDFNWB5X6-8L Package Information

Top View
[顶视图]Bottom View
[背视图]Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.000	0.035	0.039
A3	0.254REF.		0.010REF.	
D	4.944	5.096	0.195	0.201
E	5.974	6.126	0.235	0.241
D1	3.910	4.110	0.154	0.162
E1	3.375	3.575	0.133	0.141
D2	4.824	4.976	0.190	0.196
E2	5.674	5.826	0.223	0.229
k	1.190	1.390	0.047	0.055
b	0.350	0.450	0.014	0.018
e	1.270TYP.		0.050TYP.	
L	0.559	0.711	0.022	0.028
L1	0.424	0.576	0.017	0.023
H	0.574	0.726	0.023	0.029
θ	10°	12°	10°	12°