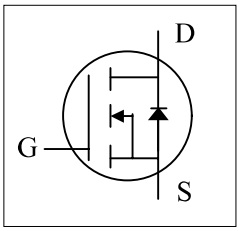
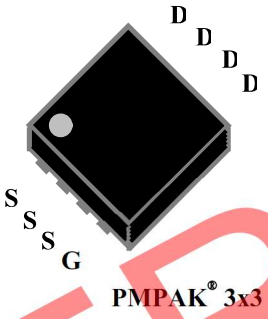
- ▼ Simple Drive Requirement
- ▼ Good Thermal Dissipation
- ▼ Low On-resistance
- ▼ RoHS Compliant & Halogen-Free



BV_{DSS}	30V
$R_{DS(ON)}$	9mΩ
I_D	16A



Description

Advanced Power MOSFETs from AP provide the designer with the best combination of fast switching, ruggedized device design, low on-resistance and cost-effectiveness.

The PMPAK® 3 x 3 package is special for DC-DC converters application and lower 1.0mm profile with backside heat sink.

Absolute Maximum Ratings@T_j=25°C(unless otherwise specified)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage	±20	V
I_D@T_A=25℃	Drain Current[3], V_{GS} @ 10V	16	A
I_D@T_A=70℃	Drain Current[3], V_{GS} @ 10V	13	A
I_{DM}	Pulsed Drain Current[1]	40	A
P_D@T_A=25℃	Total Power Dissipation	3.5	W
T_{STG}	Storage Temperature Range	-55 to 150	℃
T_J	Operating Junction Temperature Range	-55 to 150	℃

Thermal Data

Symbol	Parameter	Value	Units
Rthj-a	Maximum Thermal Resistance, Junction-ambient[3]	35	℃/W

Electrical Characteristics@T_j=25°C(unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V, I_D=250uA	30	-	-	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance[2]	V_{GS}=10V, I_D=10A	-	-	9	mΩ
		V_{GS}=4.5V, I_D=8A	-	-	16	mΩ
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS}, I_D=250uA	1	-	3	V
g_{fs}	Forward Transconductance	V_{DS}=10V, I_D=10A	-	24	-	S
I_{DSS}	Drain-Source Leakage Current	V_{DS}=30V, V_{GS}=0V	-	-	10	uA
	Drain-Source Leakage Current (T_j=70°C)	V_{DS}=24V, V_{GS}=0V	-	-	250	uA
I_{GSS}	Gate-Source Leakage	V_{GS}=±20V, V_{DS}=0V	-	-	±100	nA
Q_g	Total Gate Charge[2]	I_D=10A	-	8.7	14	nC
Q_{gs}	Gate-Source Charge	V_{DS}=15V	-	1.7	-	nC
Q_{gd}	Gate-Drain ("Miller") Charge	V_{GS}=4.5V	-	5	-	nC
$t_{d(on)}$	Turn-on Delay Time[2]	V_{DS}=15V	-	10	-	ns
t_r	Rise Time	I_D=1A	-	7	-	ns
$t_{d(off)}$	Turn-off Delay Time	R_G=6Ω	-	24	-	ns
t_f	Fall Time	V_{GS}=10V	-	8	-	ns
C_{iss}	Input Capacitance	V_{GS}=0V	-	635	1010	pF
C_{oss}	Output Capacitance	V_{DS}=25V	-	215	-	pF
C_{rss}	Reverse Transfer Capacitance	f=1.0MHz	-	125	-	pF
R_g	Gate Resistance	f=1.0MHz	-	1.8	-	Ω

Source-Drain Diode

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_{SD}	Forward On Voltage[2]	I_S=2.9A, V_{GS}=0V	-	-	1.2	V
t_{rr}	Reverse Recovery Time[2]	I_S=10A, V_{GS}=0V,	-	27	-	ns
Q_{rr}	Reverse Recovery Charge	dI/dt=100A/μs	-	20	-	nC

Notes:

1.Pulse width limited by Max. junction temperature.

2.Pulse test

3.Surface mounted on 1 in^2 copper pad of FR4 board, t ≤10sec

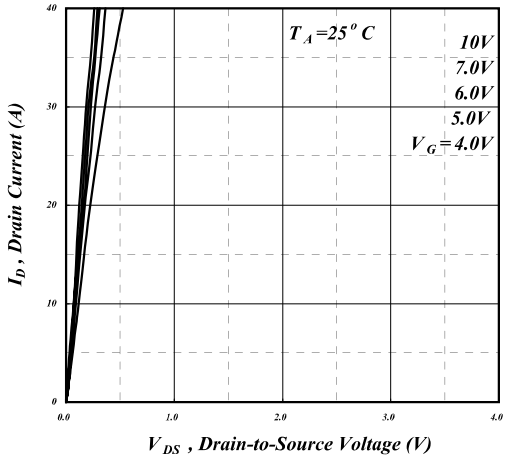


Fig 1. Typical Output Characteristics

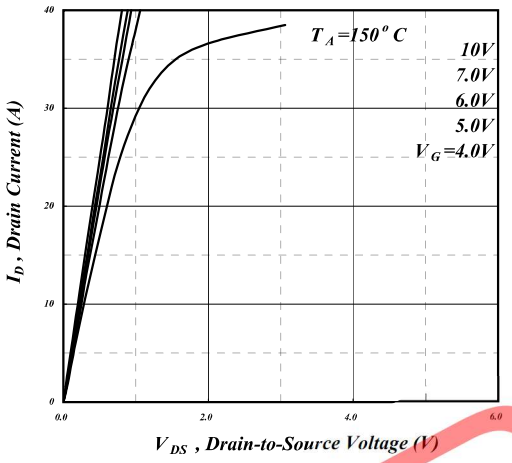


Fig 2. Typical Output Characteristics

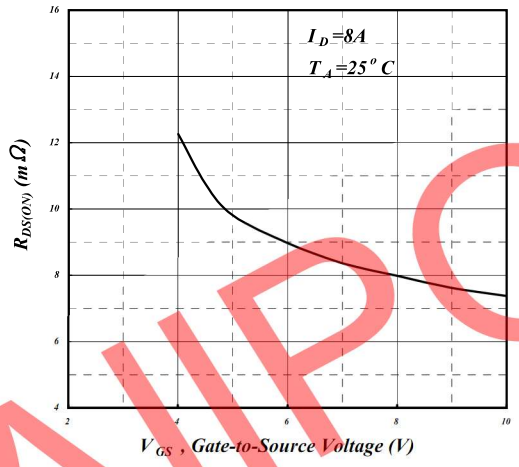


Fig 3. On-Resistance v.s. Gate Voltage

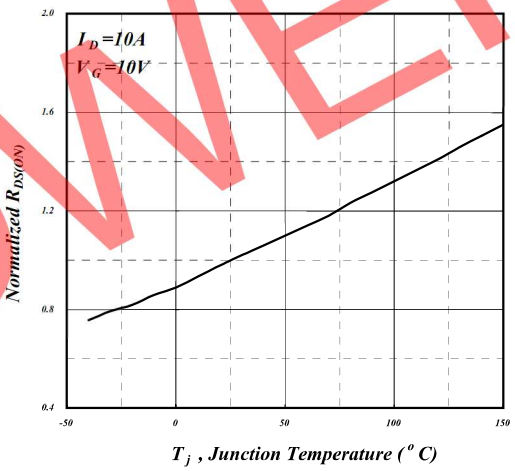


Fig 4. Normalized On-Resistance v.s. Junction Temperature

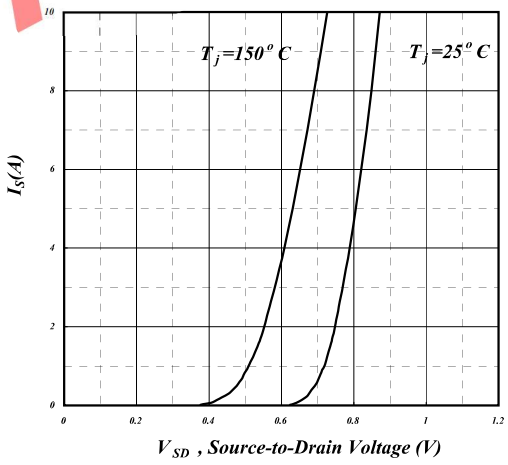


Fig 5. Forward Characteristic of Reverse Diode

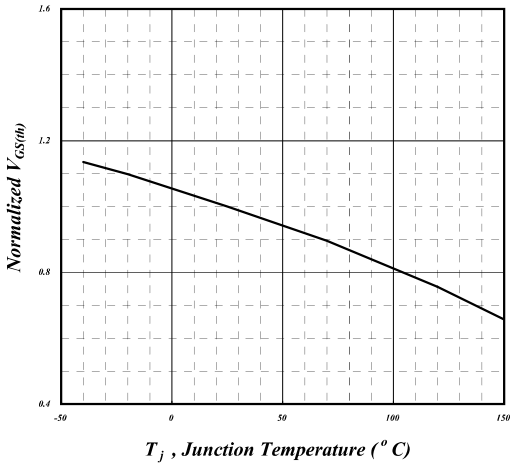


Fig 6. Gate Threshold Voltage v.s. Junction Temperature

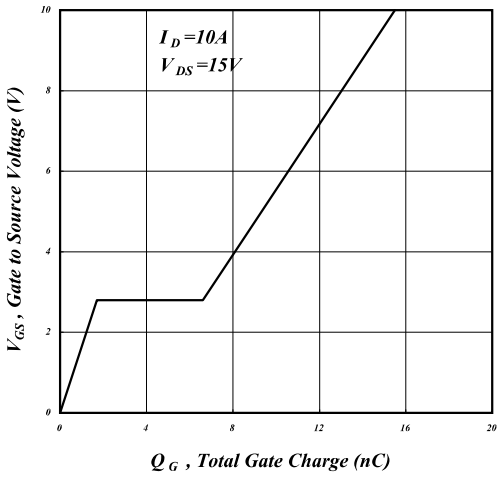


Fig 7. Gate Charge Characteristics

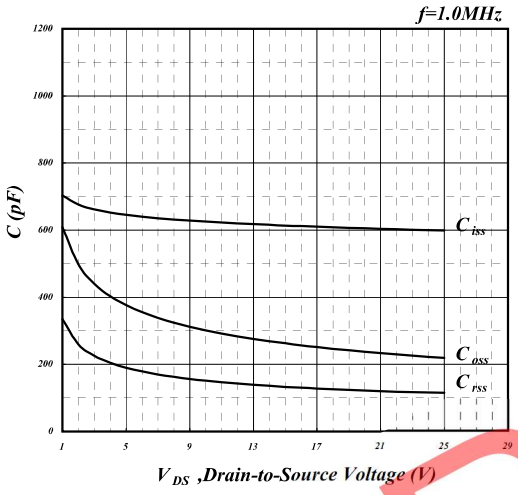


Fig 8. Typical Capacitance Characteristics

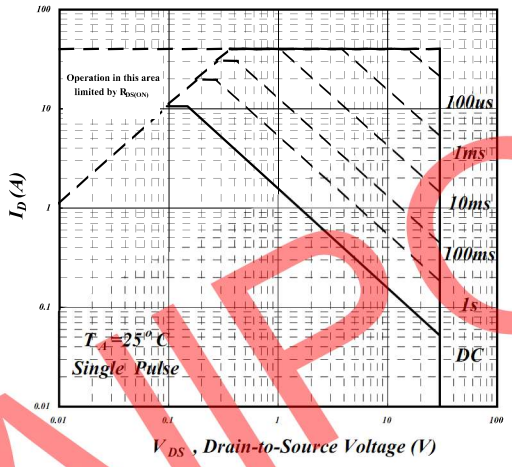


Fig 9. Maximum Safe Operating Area

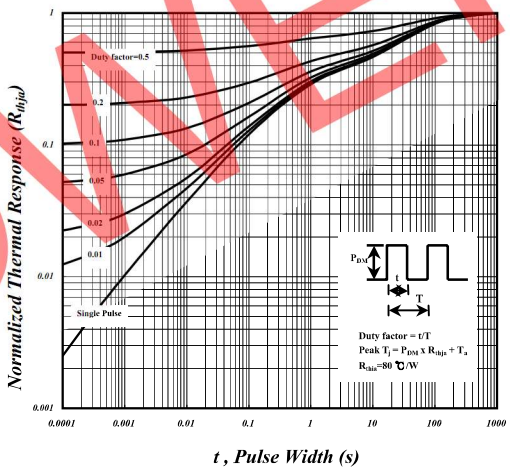


Fig 10. Effective Transient Thermal Impedance

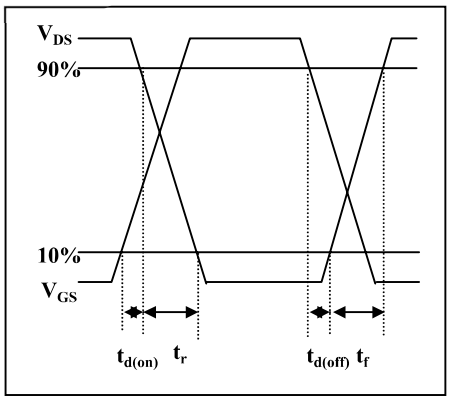


Fig 11. Switching Time Waveform

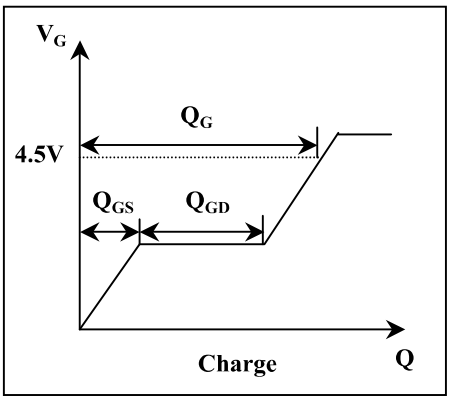


Fig 12. Gate Charge Waveform

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for MOSFET ***category:***

Click to view products by Quan Li ***manufacturer:***

Other Similar products are found below :

614233C 648584F MCH3443-TL-E MCH6422-TL-E FDPF9N50NZ FW216A-TL-2W FW231A-TL-E APT5010JVR NTNS3A92PZT5G IRF100S201 JANTX2N5237 2SK2464-TL-E 2SK3818-DL-E FCA20N60_F109 FDZ595PZ STD6600NT4G FSS804-TL-E 2SJ277-DL-E 2SK1691-DL-E 2SK2545(Q,T) D2294UK 405094E 423220D MCH6646-TL-E TPCC8103,L1Q(CM 367-8430-0972-503 VN1206L 424134F 026935X 051075F SBVS138LT1G 614234A 715780A NTNS3166NZT5G 751625C 873612G IRF7380TRHR IPS70R2K0CEAKMA1 RJK60S3DPP-E0#T2 RJK60S5DPK-M0#T0 APT5010JVFR APT12031JFLL APT12040JVR DMN3404LQ-7 NTE6400 JANTX2N6796U JANTX2N6784U JANTXV2N5416U4 SQM110N05-06L-GE3 SIHF35N60E-GE3