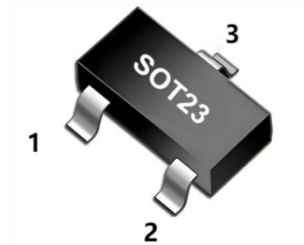


-4.2A, -30V P-CHANNEL ENHANCEMENT MODE POWER MOSFET

■ DESCRIPTION

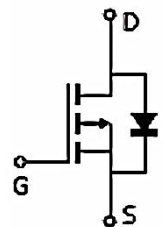
The 3407 use advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. This device is suitable for use as a load switch or in PWM applications.

The 3407 meet the ROHS and Green Product requirement with full function reliability approved.



- | |
|-----------|
| 1. GATE |
| 2. SOURCE |
| 3. DRAIN |

Equivalent Circuit



■ ABSOLUTE MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$, unless otherwise specified.)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate Source Voltage	±20	V
I_D	Continuous Drain Current	-4.2	A
I_{DM}	Pulsed Drain Current	-15	A
P_D	Power Dissipation (Note 4)	1	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55~150	°C
R_{θJA}	Thermal Resistance From Junction To Ambient (Note 4)	125	°C/W

Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (TA=25°C, unless otherwise specified)

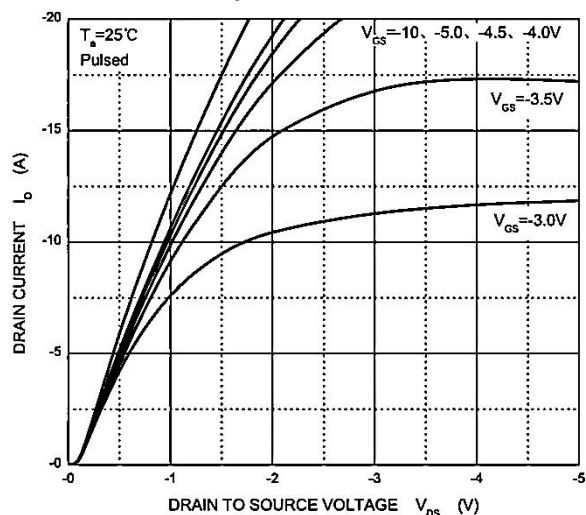
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
STATIC CHARACTERISTICS						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate-Source Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$			-1	μA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1	-1.4	-3	V
Drain-source on-state resistance(Note 1)	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-4A$		40	55	m Ω
		$V_{GS}=-4.5V, I_D=-3A$		45	60	
Diode forward voltage(Note 1)	V_{SD}	$V_{GS}=0V, I_S=-1A$			-1	V
Forward tranconductance(Note 1)	g_{FS}	$V_{DS}=-5V, I_D=-4A$	5.5			S
DYNAMIC CHARACTERISTICS(Note 2)						
Input Capacitance	C_{ISS}	$V_{GS}=0V, V_{DS}=-15V, f=1MHz$		700		pF
Output Capacitance	C_{OSS}			120		
Reverse Transfer Capacitance	C_{RSS}			75		
SWITCHING CHARACTERISTICS(Note 2)						
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=-15V, R_L=3.6\Omega, V_{GS}=-10V, R_{GEN}=3\Omega$		8.6		ns
Rise Time	t_r			5		
Turn-Off Delay Time	$t_{d(off)}$			28.2		
Fall Time	t_f			13.5		

Notes:

1. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
2. These parameters have no way to verify.
3. $PW \leq 10\mu s$, Duty cycle $\leq 1\%$.
4. Device mounted on 1"×1" FR-4 PCB with high coverage 2oz Copper ,double sided. Copper, $t \leq 10s$.

■ TYPICAL CHARACTERISTICS

Output Characteristics



Transfer Characteristics

