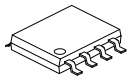
N-CHANNEL ENHANCEMENT MODE POWER MOSFET



SOP-8

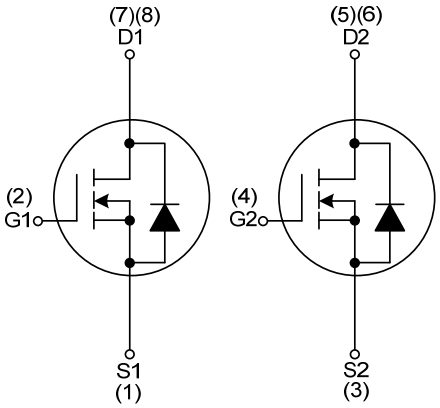
■ DESCRIPTION

The **UT4232** uses UTC advanced technology to provide excellent $R_{DS(ON)}$, low gate charge and to be operated with low gate voltages. This device is suitable for applications, such as high-side DC/DC conversion, notebook and sever.

■ FEATURES

* V_{DS}(V)=30V
* I_D=7A (V_{GS} = 10V)
* $R_{DS(ON)}$ < 22mΩ @ V_{GS}=10 V, I_D=7 A
* $R_{DS(ON)}$ < 32mΩ @ V_{GS}=4.5 V, I_D=5 A

■ SYMBOL



■ ORDERING INFORMATION

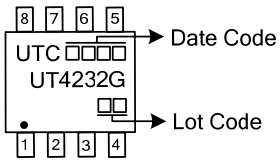
Ordering Number	Package	Pin Assignment								Packing
		1	2	3	4	5	6	7	8	
UT4232G-S08-R	SOP-8	S1	G1	S2	G2	D2	D2	D1	D1	Tape Reel

Note: Pin Assignment: G: Gate D: Drain S: Source

UT4232G-S08-R

(1) Packing Type	(1) R: Tape Reel
(2) Package Type	(2) S08: SOP-8
(3) Green Package	(3) G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	±20	V
Continuous Drain Current (Ta=25°C)(Note 2)	I_D	7.8	A
Pulsed Drain Current (Note 3)	I_{DM}	30	A
Power Dissipation (Ta=25°C)	P_D	2	W
Derate above Ta>25°C		0.016	W/°C
Junction Temperature	T_J	+150	°C
Junction and Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Notes: 1. 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.
2. Surface mounted on 1 in^2 copper pad of FR4 board, t≤10sec; 135°C/W when mounted on min.
3. Pulse width limited by $T_{J(MAX)}$

■ THERMAL DATA

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Junction to Ambient	θ_{JA}		62.5		°C/W

Note: Surface mounted on 1 in^2 copper pad of FR4 board, t≤10sec; 135°C/W when mounted on min

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0 V, I_D=250 μA	30			V
Breakdown Voltage Temperature Coefficient	$\Delta BV_{DSS}/\Delta T_J$	Reference to 25°C,I_D=1mA		0.02		V/°C
Drain-Source Leakage Current	I_{DSS}	V_{DS}=30 V,V_{GS}=0 V			1	μA
Gate-Source Leakage Current	I_{GSS}	V_{GS}=±20 V, V_{DS}=0 V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS}= V_{GS}, I_D=250 μA	1		3	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	V_{GS}=10 V, I_D=7 A			22	mΩ
		V_{GS}=4.5 V, I_D=5 A			32	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	C_{ISS}	V_{DS}=25V, V_{GS}=0 V, f=1MHz		720	1150	pF
Output Capacitance	C_{OSS}			230		pF
Reverse Transfer Capacitance	C_{RSS}			200		pF
SWITCHING PARAMETERS						
Turn-ON Delay Time	$t_{D(ON)}$	V_{GS}=10V,V_{DS}=15V, R_D=15Ω, R_G=3.3Ω, I_D=1 A		10		ns
Turn-ON Rise Time	t_R			7		ns
Turn-OFF Delay Time	$t_{D(OFF)}$			22		ns
Turn-OFF Fall-Time	t_F			8		ns
Total Gate Charge	Q_G	V_{GS}=4.5 V, V_{DS}=24 V, I_D=7 A		13	21	nC
Gate Source Charge	Q_{GS}			3		nC
Gate Drain Charge	Q_{GD}			9		nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source Diode Forward Voltage	V_{SD}	I_S=1.7 A, V_{GS}=0 V			1.2	V
Reverse Recovery Time	t_{RR}	I_S=7 A, V_{GS}=0 V, dI/dt=100A/μs		16		ns
Reverse Recovery Charge	Q_{RR}			8		nC