

KEC

SEMICONDUCTOR
TECHNICAL DATA

KMB014P30QA

P-Ch Trench MOSFET

GENERAL DESCRIPTION

This Trench MOSFET has better characteristics, such as fast switching time, low on resistance,, low gate charge and excellent avalanche characteristics. It is mainly suitable for portable for portable equipment and SMPS.

FEATURES

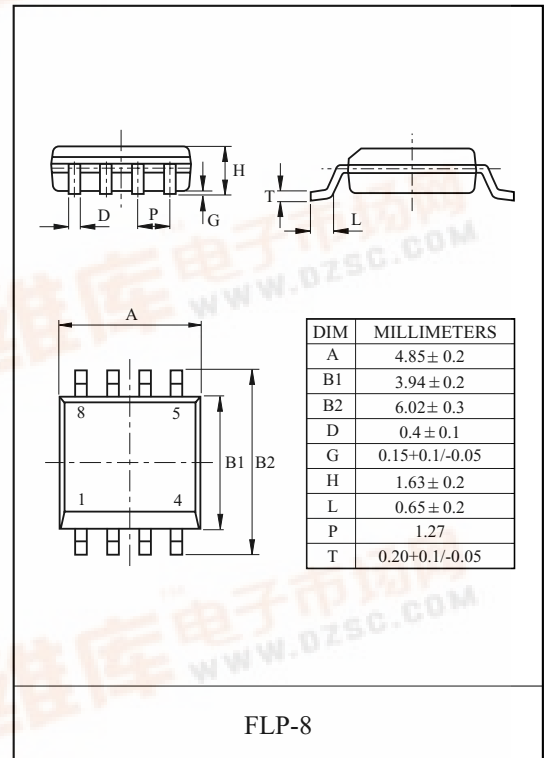
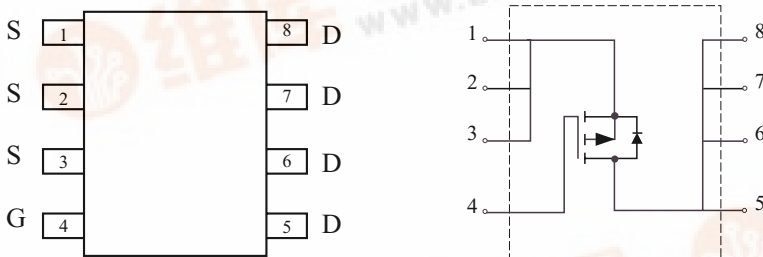
- $V_{DS} = -30V$, $I_D = -14A$.
- Drain-Source ON Resistance.
 $R_{DS(ON)} = 10m\ \Omega$ (Max.) @ $V_{GS} = -10V$
 $R_{DS(ON)} = 18m\ \Omega$ (Max.) @ $V_{GS} = -4.5V$
- Super High Dense Cell Design

MOSFET Maximum Ratings (Ta=25°C Unless otherwise noted)

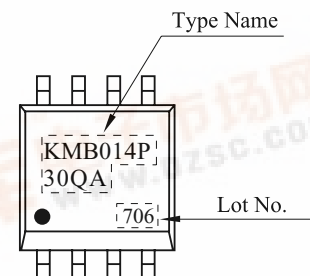
CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain Source Voltage		V_{DS}	-30	V
Gate Source Voltage		V_{GS}	± 25	V
Drain Current	DC	I_D^*	-14	A
	Pulsed	I_{DP}	-70	A
Drain Source Diode Forward Current		I_S	-1.7	A
Drain Power Dissipation		P_D^*	2.5	W
Maximum Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C
Thermal Resistance, Junction to Ambient		R_{thJA}^*	50	°C/W

Note : *Surface Mounted on FR4 Board

PIN CONNECTION (TOP VIEW)



Marking



KMB014P30QA

ELECTRICAL CHARACTERISTICS (Ta=25°C) UNLESS OTHERWISE NOTED

[illegible]

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Fig 1. $I_D - V_{DS}$

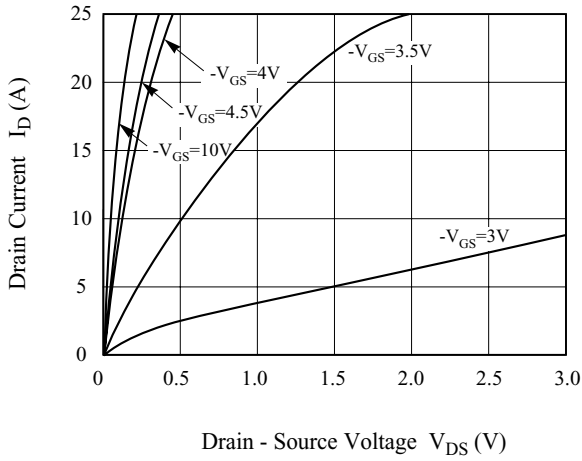


Fig 2. $I_D - V_{GS}$

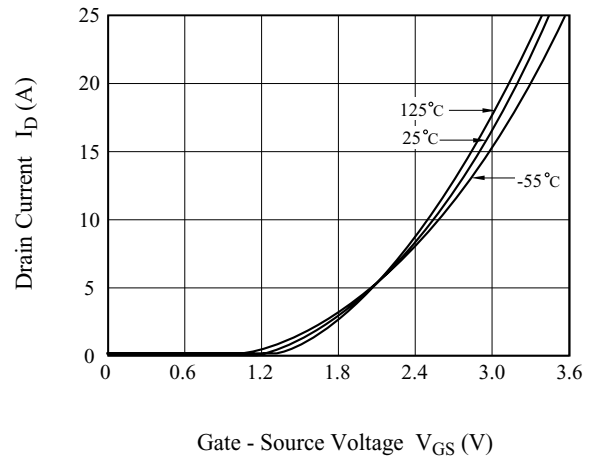


Fig 3. $C - V_{DS}$

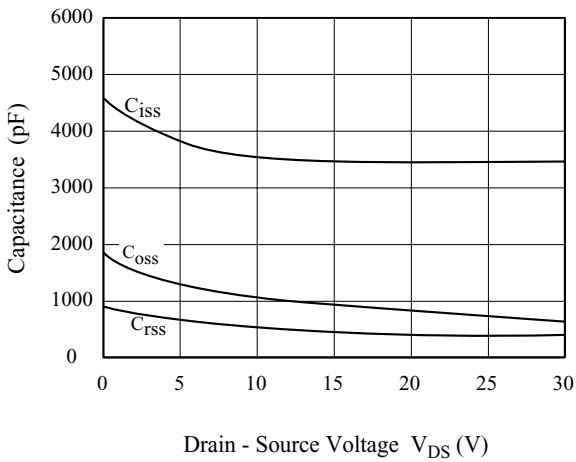


Fig 4. $R_{DS(ON)} - T_j$

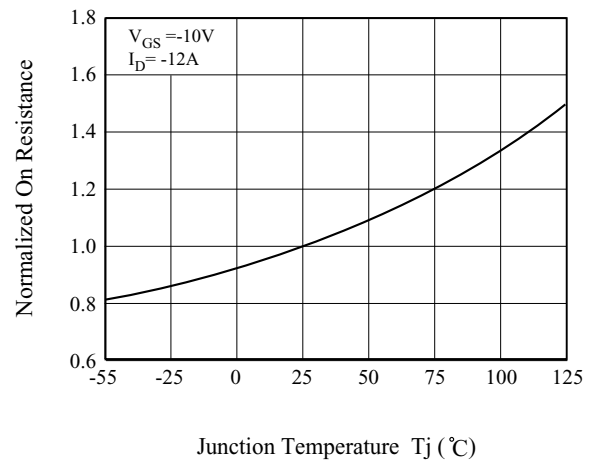


Fig 5. $V_{th} - T_j$

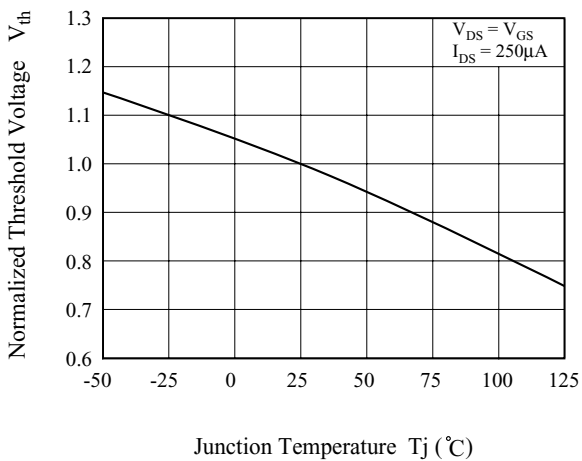
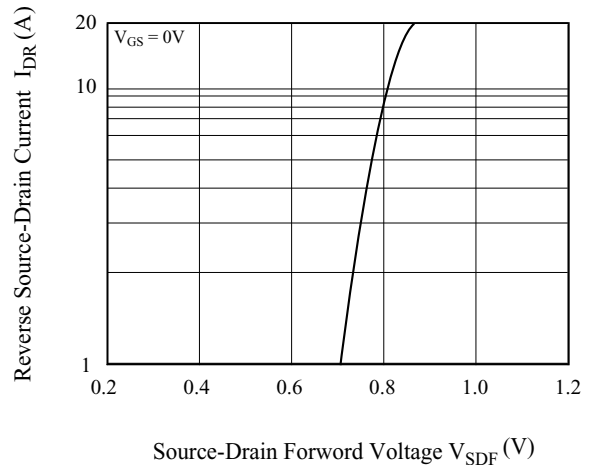


Fig 6. $I_{DR} - V_{SD}$



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Fig 7. $Q_g - V_{GS}$

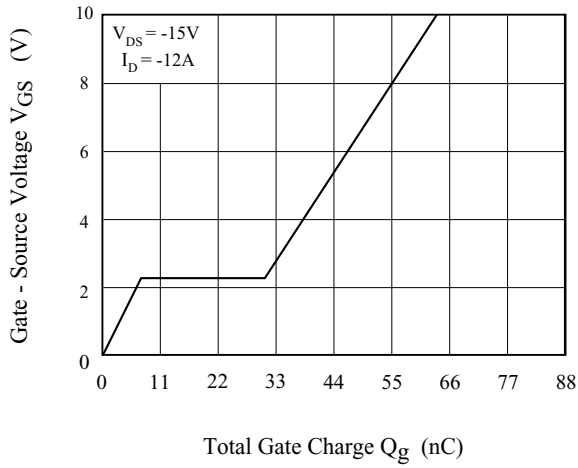


Fig8. Safe Operation Area

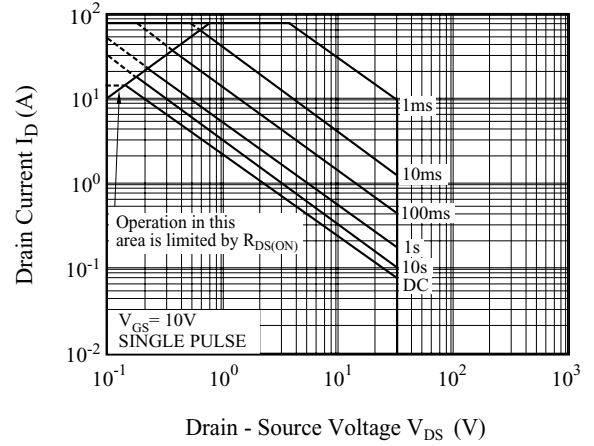


Fig9. Transient Thermal Response Curve

