



Micro Commercial Components



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MCCD2005

Features

- Advanced trench MOSFET process technology
Ultra low on-resistance with low gate charge
Halogen free available upon request by adding suffix "-HF"
Epoxy meets UL 94 V-0 flammability rating
Moisture Sensitivity Level 1
Marking:2005

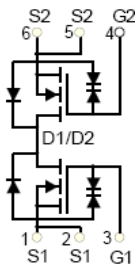
Maximum Ratings @ 25°C Unless Otherwise Specified

Table with 4 columns: Symbol, Parameter, Rating, Unit. Rows include V_DS, I_D, I_DM, V_GS, R_thetaJA, T_J, T_STG.

Notes:

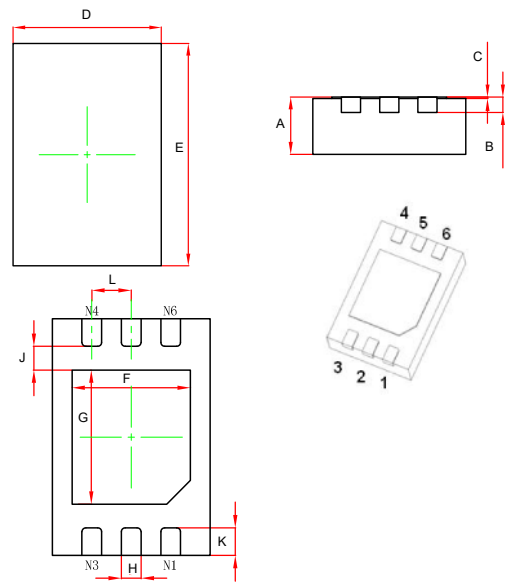
- 1. Repetitive Rating: Pulse width limited by junction temperature.

Equivalent Circuit



Dual N-Channel Power MOSFET

DFN2030-6



Dimensions table with columns: DIM, INCHES (MIN, MAX), MM (MIN, MAX), NOTE. Rows A through L.

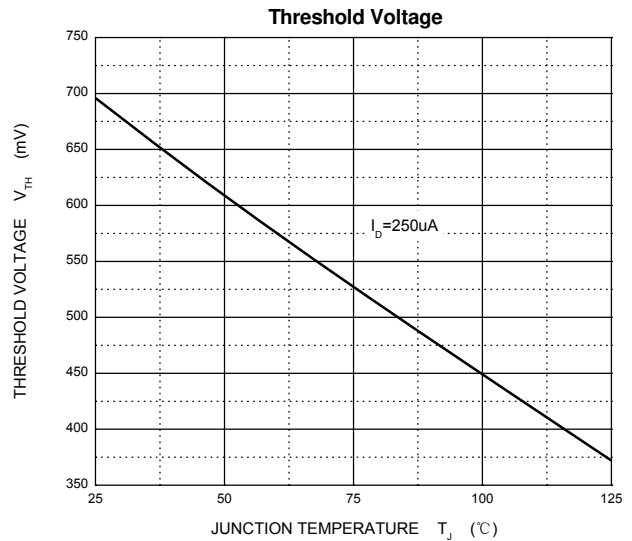
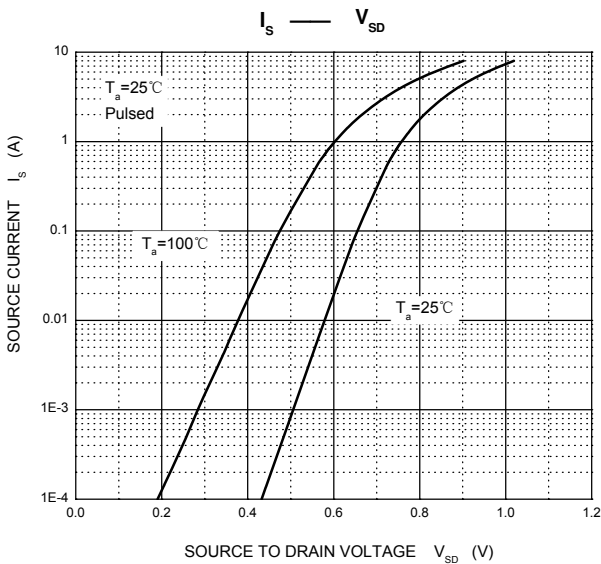
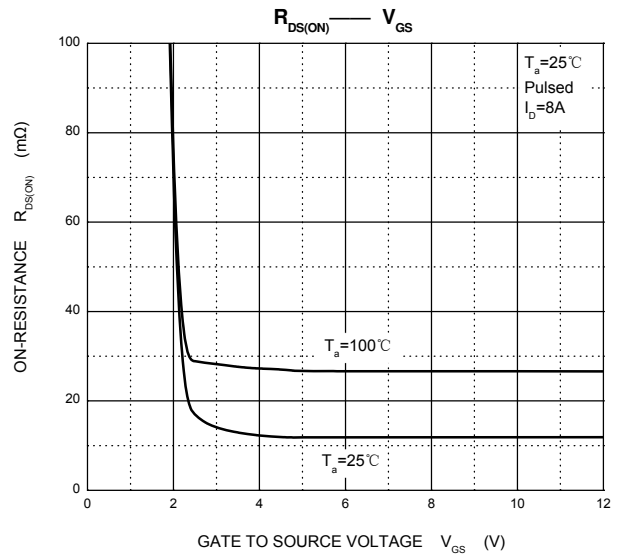
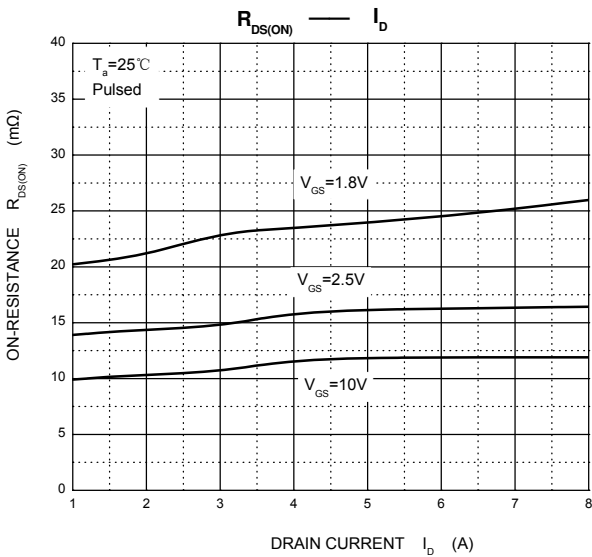
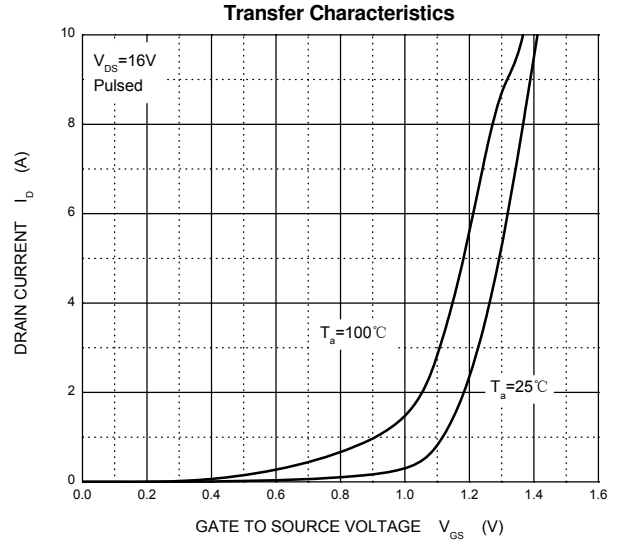
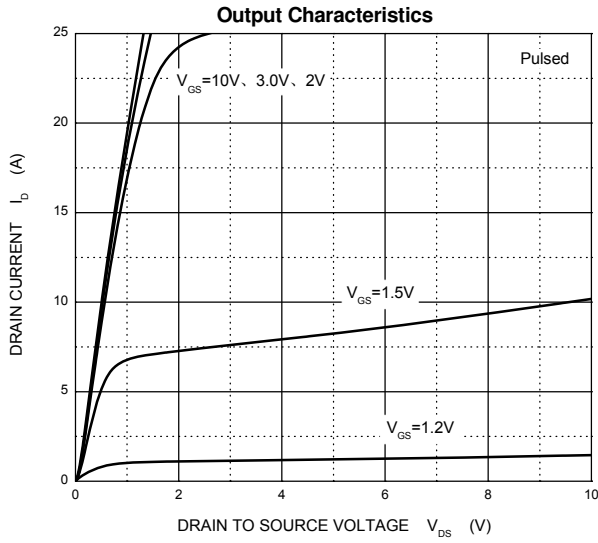
ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =16V, V _{GS} = 0V			10	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V, V _{DS} = 0V			±10	μA
Gate threshold voltage (note 1)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.5		1	V
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} =10V, I _D =8A			13	mΩ
		V _{GS} =4.5V, I _D =5A			14	mΩ
		V _{GS} =3.8V, I _D =5A			15.5	mΩ
		V _{GS} =2.5V, I _D =4A			19	mΩ
		V _{GS} =1.8V, I _D =3A			27	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} =5V, I _D =8A		36		S
Diode forward voltage(note 1)	V _{SD}	I _S =1A, V _{GS} = 0V			1	V
DYNAMIC PARAMETERS (note 2)						
Input Capacitance	C _{iSS}	V _{DS} =10V, V _{GS} =0V, f =1MHz		1800		pF
Output Capacitance	C _{oSS}			230		pF
Reverse Transfer Capacitance	C _{rSS}			200		pF
Total gate charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =8A		17.9		nC
Gate-source charge	Q _{gs}			1.5		nC
Gate-drain charge	Q _{gd}			4.7		nC
SWITCHING PARAMETERS(note 2)						
Turn-on delay time	t _{d(on)}	V _{GS} =10V, V _{DD} =10V, R _L =1.2Ω, R _{GEN} =3Ω		2.5		ns
Turn-on rise time	t _r			7.2		ns
Turn-off delay time	t _{d(off)}			49		ns
Turn-off fall time	t _f			10.8		ns

Notes :

1. Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.
2. Guaranteed by design, not subject to production testing.

Typical Characteristics





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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