

General Description

The MY028CNE2 uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with gate voltages as low as 4.5V. This device is suitable for use as a Battery protection or in other Switching application.

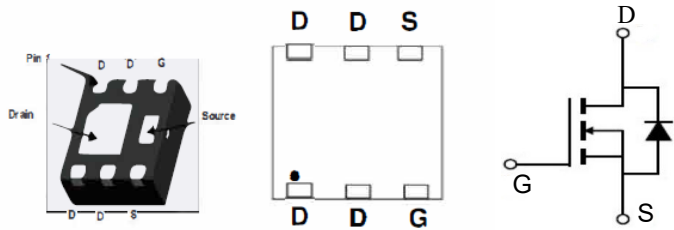


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V_{DSS}	20	V
I_D	8	A
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	19	m Ω
$R_{DS(ON)}$ (at $V_{GS}=2.5V$)	25	m Ω

Application

- Battery protection
- $\text{S} \text{ } \text{A} \text{ } \text{A} \text{ } \text{A} \text{ } \text{A}$
- Uninterruptible power supply



DUW U[Y A Uf_]b[UbX CfXYf]b[-bZfa U]cb

DfcXi Wi-8	DUW	A Uf_]b[E hmfD7 GŁ
MY028CNE2	PDFN2*2-6	028CN	í €€€

5 Vgc`i hY'AU ja i a 'FU]b[g'fH5 1&) °C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 10	V
Drain Current-Continuous	I_D	8	A
Pulsed Drain Current	I_{DM}	40	A
Maximum Power Dissipation	P_D	60	W
Derating factor	$R_{\theta JC}$	0.48	W/°C
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 To 150	°C
Thermal Resistance, Junction-to-Case ^(Note 2)	$R_{\theta JC}$	167	°C/W

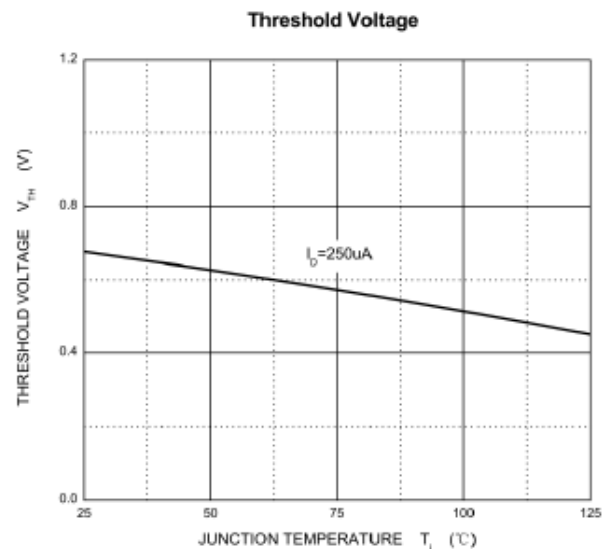
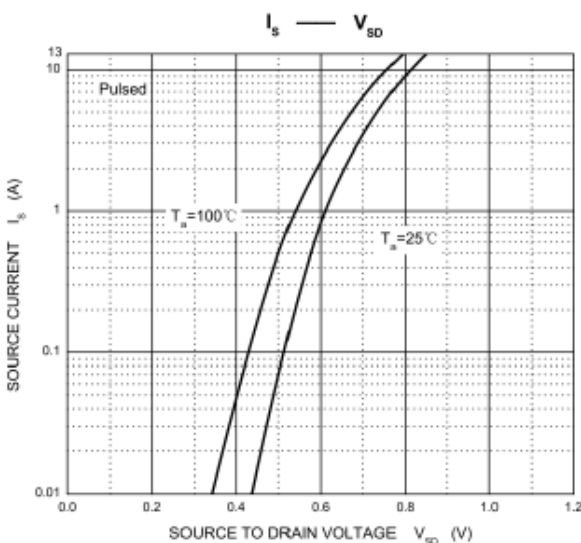
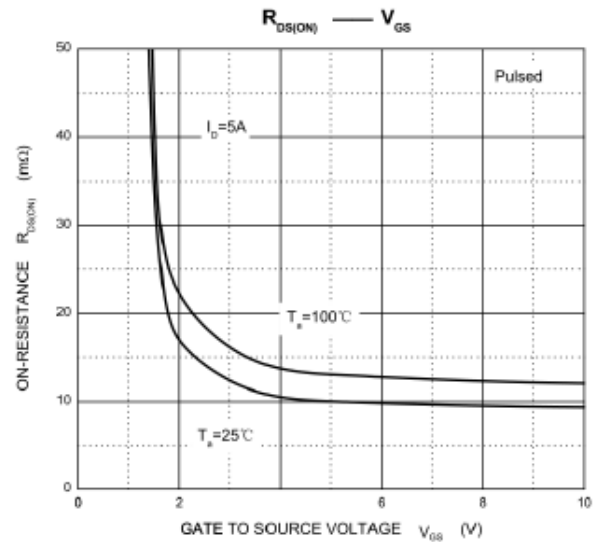
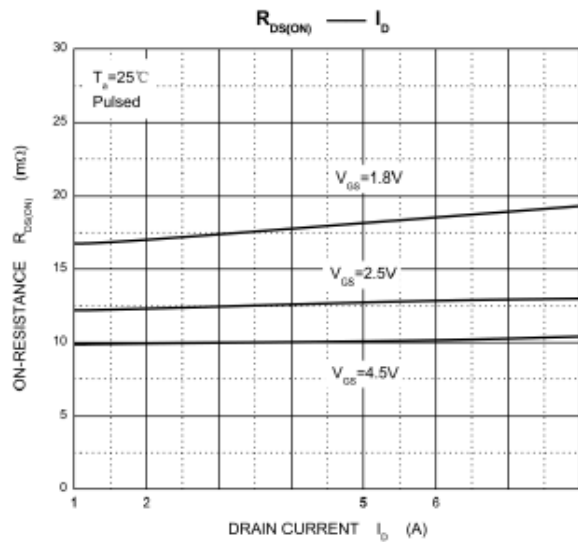
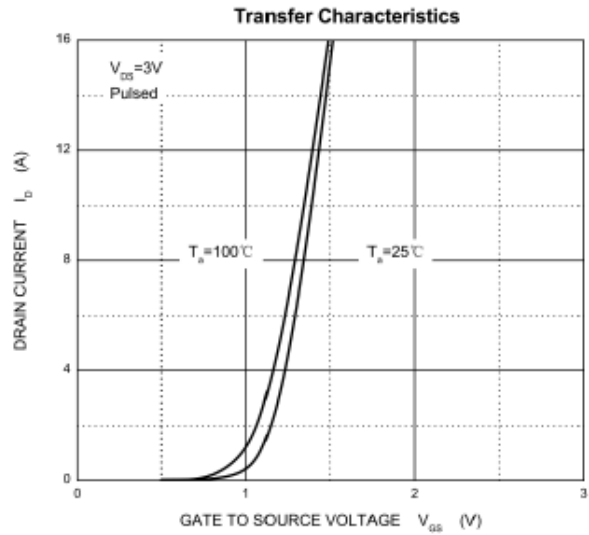
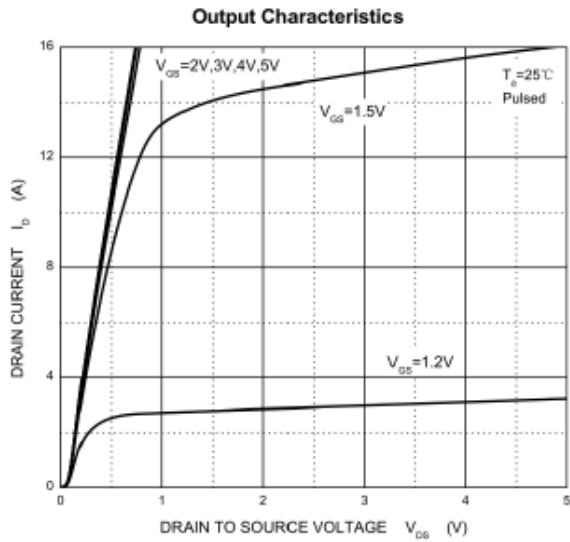
Electrical Characteristics (T_c=25 °C, unless otherwise noted)

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} =20V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V, V _{DS} = 0V			±100	nA
Gate threshold voltage (note 3)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.35	0.7	1	V
Drain-source on-resistance(note 3)	R _{DS(on)}	V _{GS} =4.5V, I _D =5A		19	28	mΩ
		V _{GS} =2.5V, I _D =5A		25	33	mΩ
		V _{GS} =1.8V, I _D =5A				mΩ
Forward tranconductance(note 3)	g _{FS}	V _{DS} =4V, I _D =9.7A	20			S
Diode forward voltage (note 3)	V _{SD}	I _S =10A, V _{GS} = 0V			1.2	V
DYNAMIC PARAMETERS (note 4)						
Input Capacitance	C _{iSS}	V _{DS} =4V, V _{GS} =0V, f =1MHz		1800		pF
Output Capacitance	C _{oSS}			650		pF
Reverse Transfer Capacitance	C _{rSS}			450		pF
Gate Resistance	R _g	f=1MHz		2.5		Ω
SWITCHING PARAMETERS (note 4)						
Turn-on delay time	t _{d(on)}	V _{GEN} =4.5V, V _{DD} =4V, I _D =10A, R _g =1Ω R _L =0.4 Ω		12	20	ns
Turn-on rise time	t _r			10	15	ns
Turn-off delay time	t _{d(off)}			65	100	ns
Turn-off fall time	t _f			20	30	ns
Total Gate Charge	Q _g	V _{DS} =4V, V _{GS} =5V I _D =10A			32	nC
Gate-Source Chage	Q _{gs}			2.5		nC
Gage-Drain Charge	Q _{gd}			6.5		nC

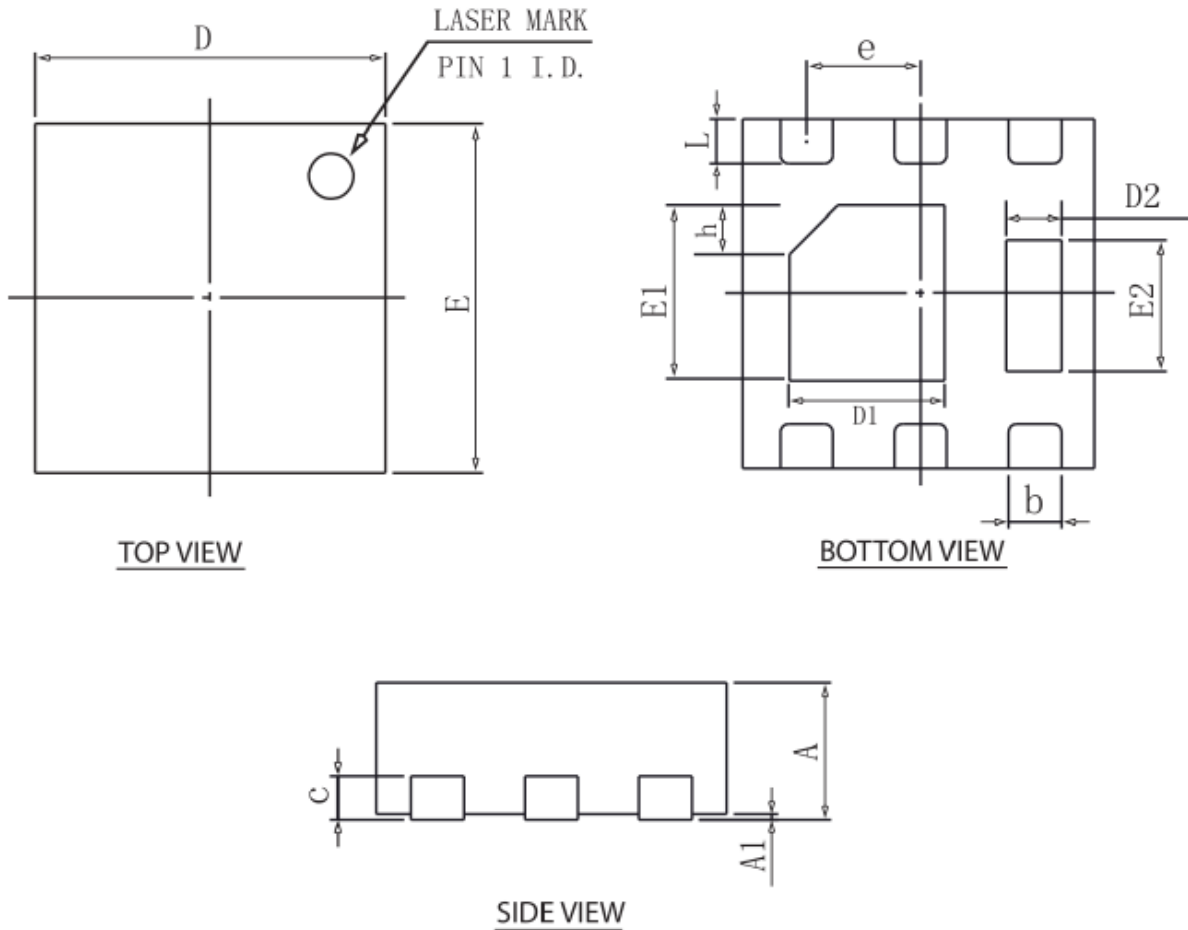
Notes :

- 1.Surface mounted on FR4 board using 1 square inch pad size,1oz copper.
- 2.Surface mounted on FR4 board using the minimum pad size,1oz copper.
3. Pulse test : Pulse width=300μs, duty cycle≤2%.
4. These parameters have no way to verify.

Typical Characteristics



Package Mechanical Data-DFN2*2-6L-JQ Single



COMMON DIMENSIONS

SYMBOL	mm		
	MIN	NOM	MAX
A	0.413	0.452	0.493
A1	NA	0.02	0.05
b	0.20	0.27	0.34
c	0.18	0.20	0.25
D	1.95	2.00	2.07
E	1.95	2.00	2.07
D1	0.80	0.90	1.00
E1	0.90	1.00	1.10
D2	0.20	0.30	0.40
E2	0.65	0.75	0.85
L	0.20	0.25	0.35
h	0.20	0.25	0.30
e	0.65BSC		