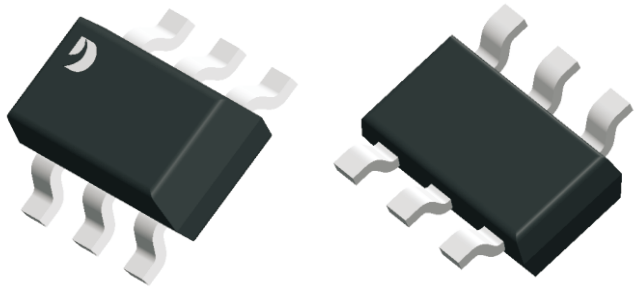
N-Channel MOSFET

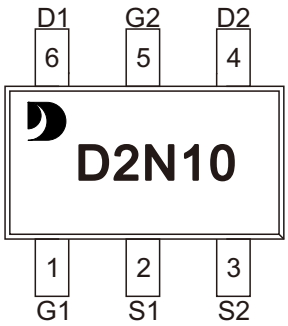


Features

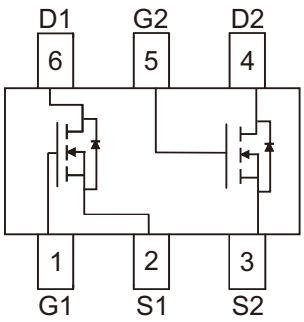
- 100V,2A
- Advanced Trench Technolog
- Provide Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead free product is acquired

Application

- Load Switch
- PWM Application
- Power management



Marking and pin Assignment



DNM2N10A

Absolute Maximum Ratings (TA=25℃ unless otherwise specified)

Symbol	Parameter	Max	Units
V_{DSS}	Drain-Source Voltage	100	V
V_{GSS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current	2	A
P_D	Power Disspation Steady State	1.5	W
$R_{\theta JA}$	Thermal Resistance, Junction to Case	80	℃W
T_j, T_{stg}	Operating and Storage Temperature Range	-55~+150	℃

Electrical Characteristics

Ratings at 25 ℃ ambient temperature unless otherwise specified.

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V,I_D=250uA	100			V
Static Drain-Source On-Resistance (Note1)	$R_{DS(on)}$	V_{GS}=10V,I_D=1A		220	320	mΩ
		V_{GS}=4.5V,I_D=1A		300	450	mΩ
Gate Threshold Voltage (Note1)	$V_{GS(th)}$	V_{GS}=V_{DS},I_D=250uA	0.8	1.2	1.6	V
Gate-to-Source Leakage Current	I_{DSS}	V_{DS}=80V,V_{GS}=0V			1	uA
Gate-Body Leakage Current	I_{GSS}	V_{DS}=0V,V_{GS}=± 20V			± 100	nA
Input Capacitance	C_{iss}	V_{DS}=50V,V_{GS}=0V f=1.0MHz		362		pF
Output Capacitance	C_{oss}			10.5		pF
Reverse Transfer Capacitance	C_{rss}			6.8		pF
Total Gate Charge	Qg	V_{DS}=50V,V_{GS}=10V I_D=1A		3.5		nC
Gate-Source Charge	Qgs			0.5		nC
Gate-Drain("Miller") Charge	Qgd			0.7		nC
Turn-on Delay Time	$td_{(on)}$	V_{DD}=50V,V_{GS}=10V I_D=2A R_G=2Ω		9.1		ns
Turn-on Rise Time	tr			1.8		ns
Turn-off Delay Time	$td_{(off)}$			8.3		ns
Turn-off Fall Time	tf			7.6		ns

1. Pulse test ;Pulse width≦300us,duty cycle≦2%

Typical Electrical and Thermal Characteristics

Fig 1 Output Characteristics

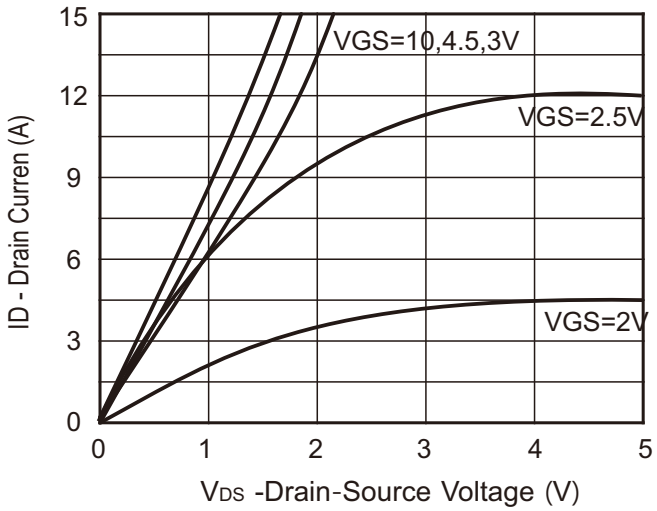


Fig 2 Thermal Characteristics

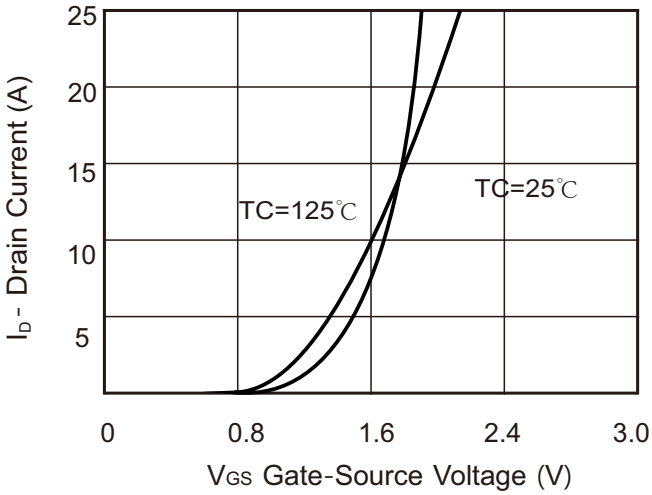


Fig 6 Source- Drain Diode Forward

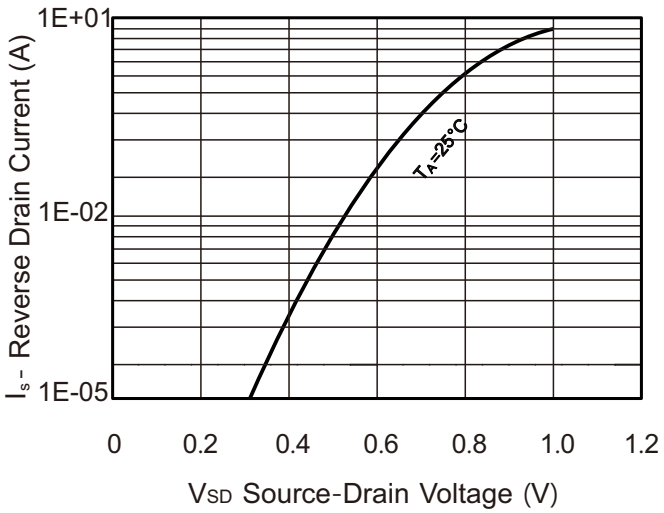
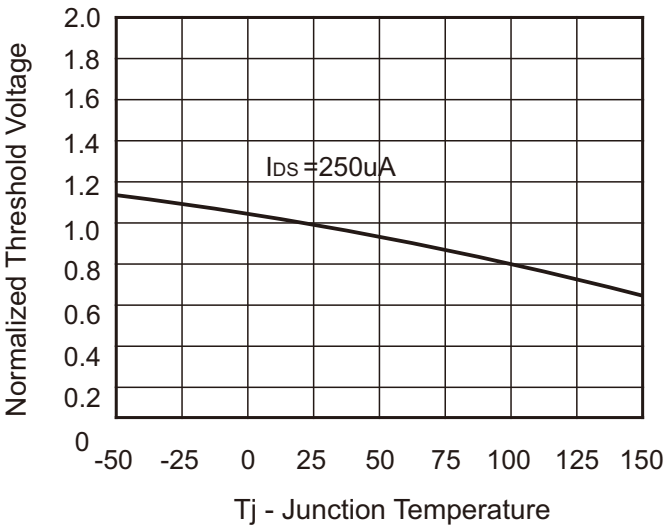
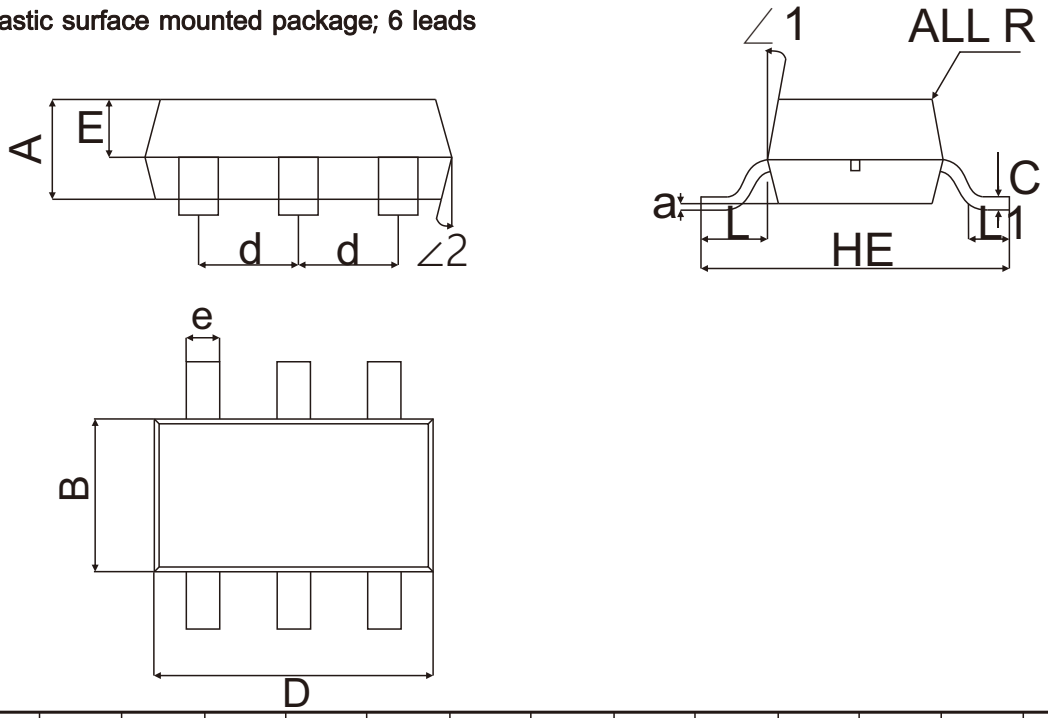


Fig 4 Gate Threshold Characteristics



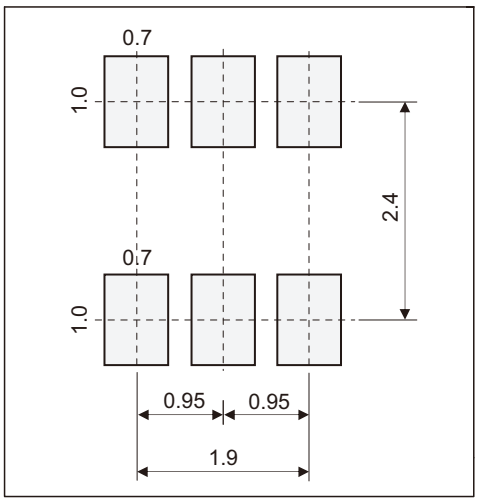
PACKAGE OUTLINE

Plastic surface mounted package; 6 leads



Unit		A	B	C	HE	D	d	E	e	L	L1	a	R	∠1	∠2
mm	max	1.05	1.80	0.20	2.90	3.12	1.00	0.65	0.40	0.70	0.60	0.2 (ref)	R0.1 (ref)	12°	10°
	typ	0.95	1.60	0.15	2.80	2.92	0.95	0.55	0.35	0.60	/				
	min	0.85	1.40	0.10	2.70	2.72	0.90	0.45	0.30	0.50	0.20				
mil	max	41	71	8	114	123	39	26	16	28	24	8 (ref)	R4 (ref)		
	typ	37	63	6	110	115	37	22	14	24	/				
	min	33	55	4	106	107	35	18	12	20	8				

The recommended mounting pad size



Marking

Type number	Marking code
DNM2N10A	D2N10