

/ Descriptions

DFN3×2-6L N

Common-Drain Dual N-Channel Enhancement MOSFET in a DFN3×2-6L Plastic Package.

/ Features

$$V_{DS(V)}=20V \quad I_D=12.3A$$

$R_{DS(ON)}@4.5V$ 7.2m (Typ.6.6mR)

$R_{DS(ON)}@3.8V$ 8.2m (Typ.6.9mR)

$R_{DS(ON)}@2.5V$ 10.5m (Typ.8.1mR)

2KV

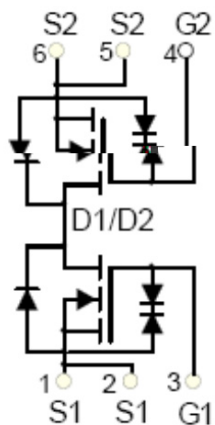
ESD protected up to 2KV,HF Product.

/ Applications

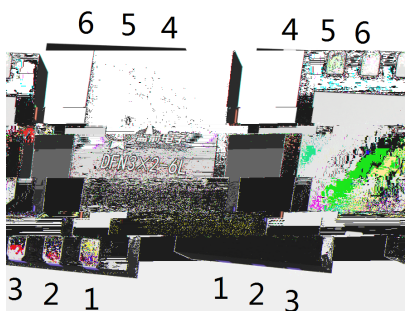
POL

Handheld Instruments, POL Applications, Battery Protection Applications.

/ Equivalent Circuit



/ Pinning



/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	20	V
Drain Current		I_D	12.3	A
Drain Current - Pulsed		I_{DM}	62	A
Gate-Source Voltage		V_{GS}	± 10	V
Power Dissipation		P_D	1.7	W
Operating and Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^{\circ}\text{C}$
Junction-to-Ambient	Steady-State	R_{JA}	73.5	/W

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\text{ A}$	20	21		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V$ $V_{GS}=0V$			1.0	A
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm 10V$ $V_{DS}=0V$			10	A
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\text{ A}$	0.5	0.7	1.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=4.5V$ $I_D=3A$		6.6	7.2	m
		$V_{GS}=4.0V$ $I_D=3A$		6.8	7.5	m
		$V_{GS}=3.8V$ $I_D=3A$		6.9	8.2	m
		$V_{GS}=3.1V$ $I_D=3A$		7.3	9.2	m
		$V_{GS}=2.5V$ $I_D=3A$		8.1	10.5	m
Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1.0A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=10V$ $V_{GS}=0V$ $f=1.0MHz$		1900		pF
Output Capacitance	C_{oss}			255		pF
Reverse Transfer Capacitance	C_{rss}			200		pF
Total Gate Charge	Q_g	$V_{GS}=4.5V$ $V_{DS}=15V$ $I_D=10A$		17.9		nC
Gate-Source Charge	Q_{gs}			1.5		nC
Gate-Drain Charge	Q_{gd}			4.7		nC
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=10V$ $V_{GS}=5.0V$ $R_L=1.35$ $R_{GEN}=3$		2.2		ns
Turn-On Rise Time	t_r			5.9		ns
Turn-Off Delay Time	$t_{d(off)}$			40		ns
Turn-Off Fall Time	t_f			90		ns

/ Electrical Characteristic Curve

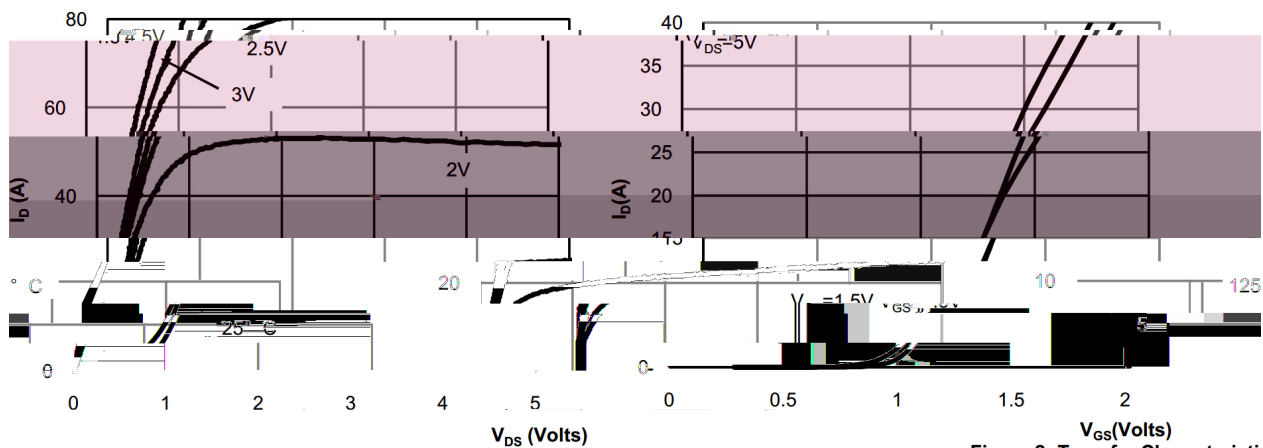


Fig 1: On-Region Characteristics

Figure 2: Transfer Characteristics

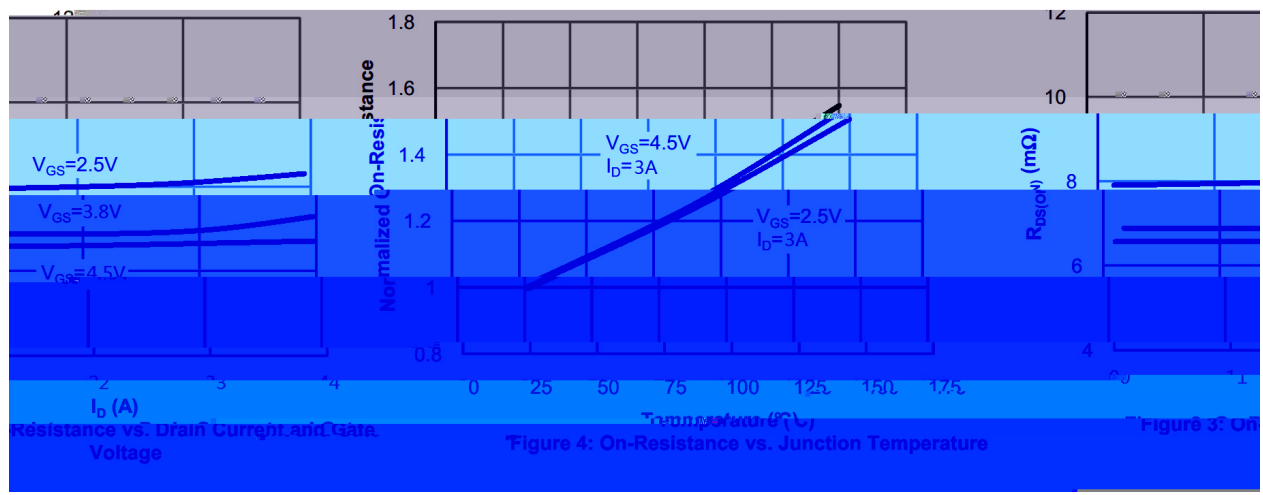


Figure 4: On-Resistance vs. Junction Temperature

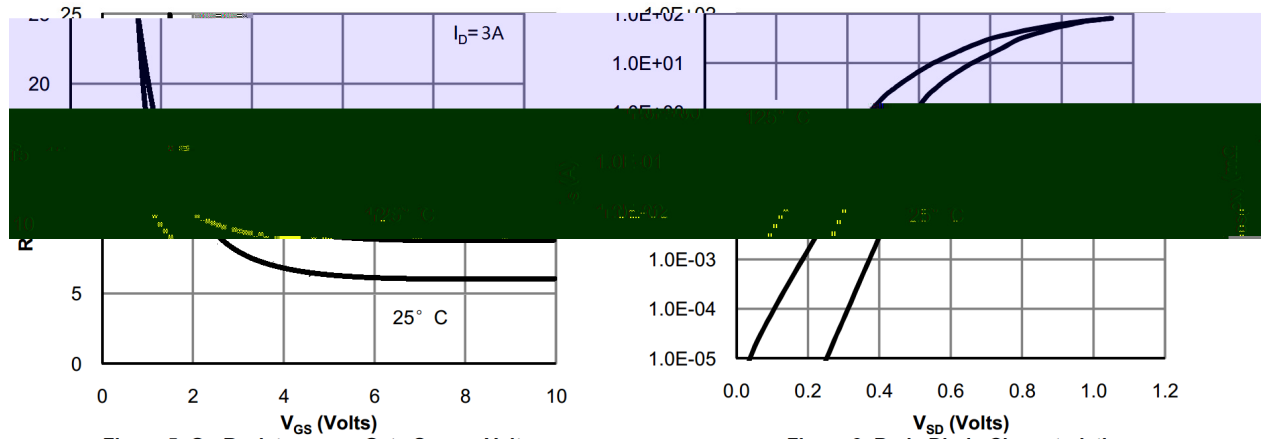
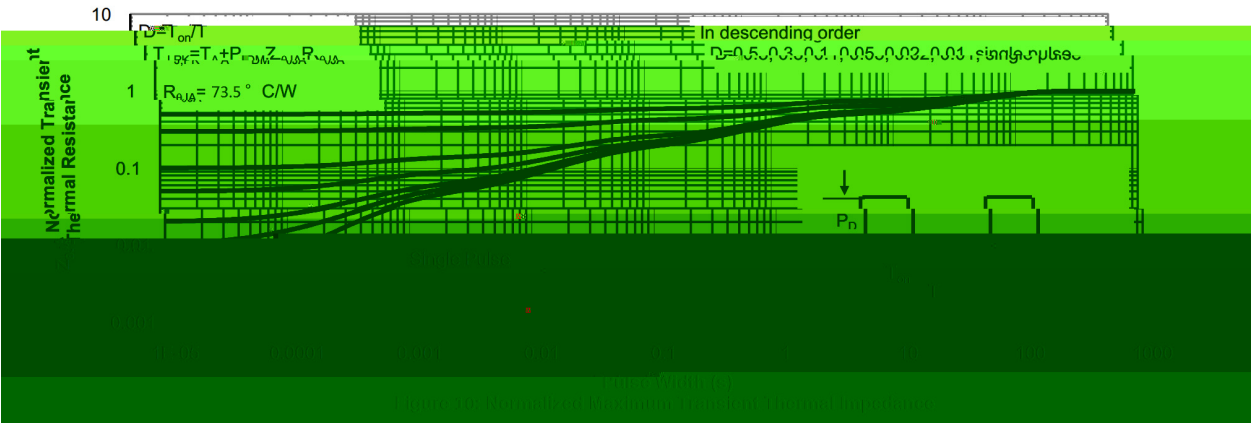
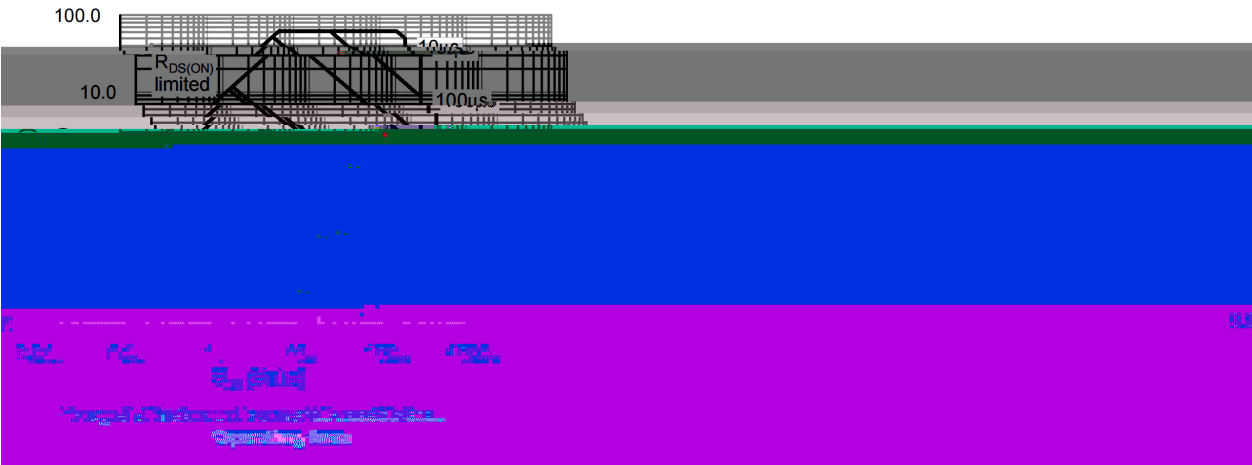
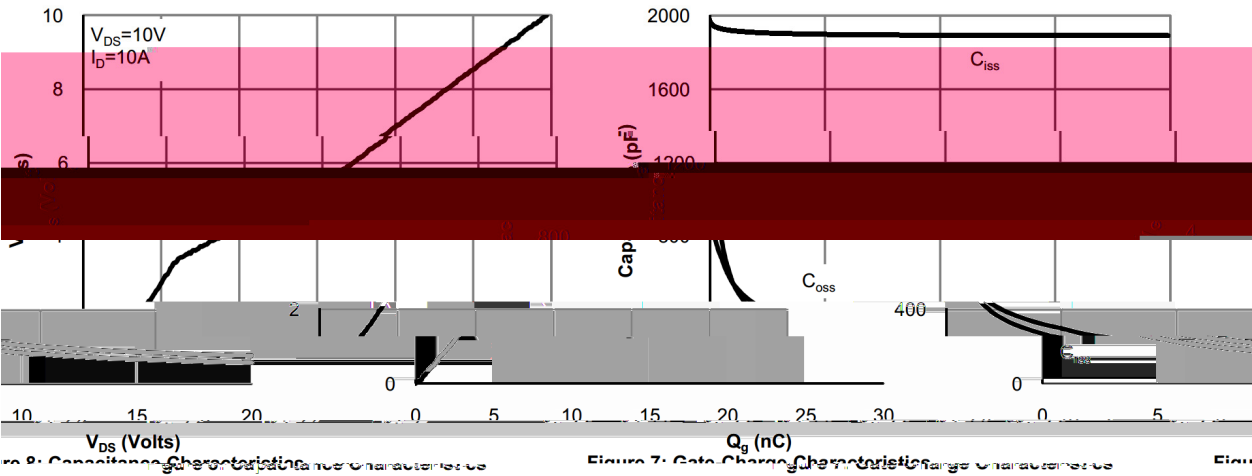


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

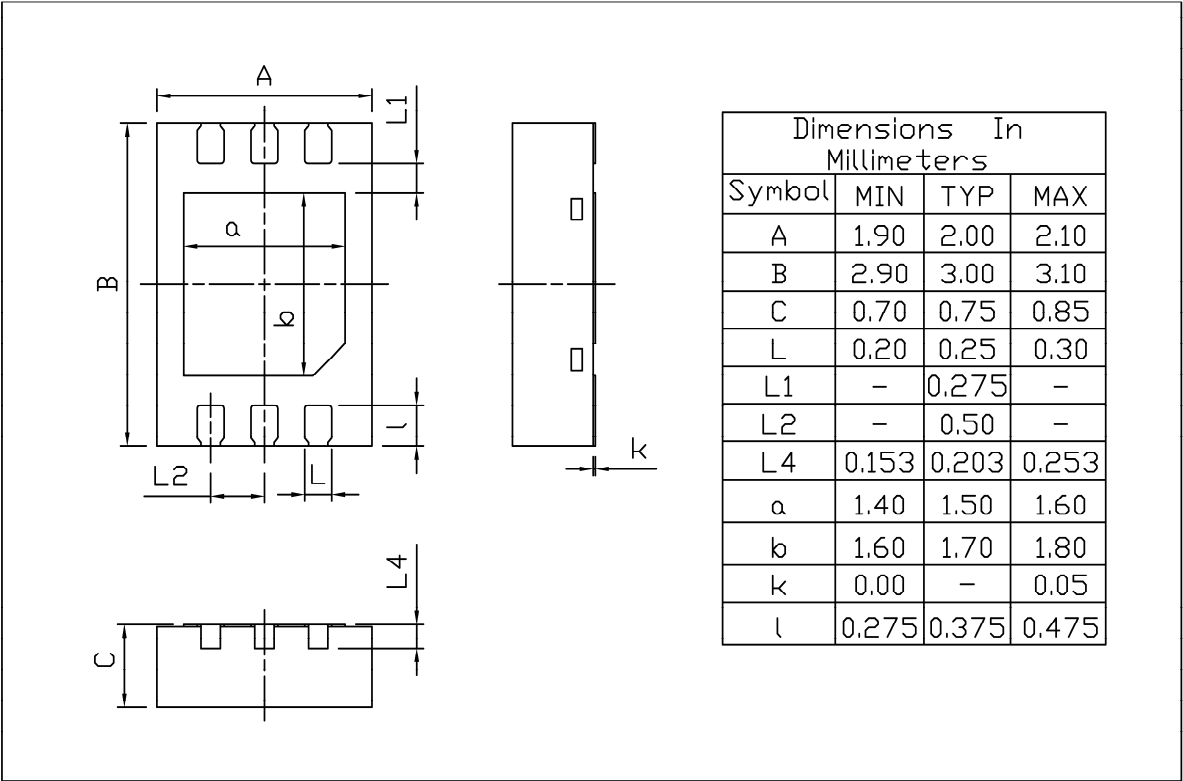
/ Electrical Characteristic Curve



/ Package Dimensions

DFN3X2-6L

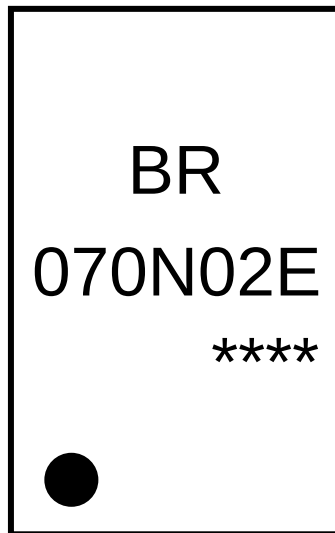
Unit:mm



Rev.00 202311



/ Marking Instructions



BR

070N02E

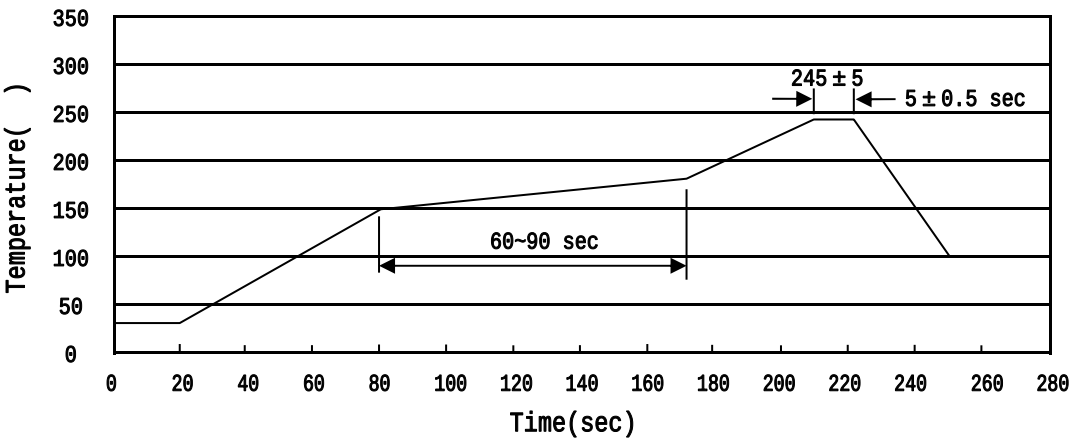
Note:

BR: Company Code

070N02E: Product Type Code

****: Lot No. Code, code change with Lot No

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Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5℃ Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
DFN3×2-6L	3,000	10	30,000	4	120,000	7 ×8	210×205×205	445×435×230

/ Notices