

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	80	V
Drain Current - Continuous		I_D	280	A
Drain Current - Continuous		$I_D(T_c=100^\circ\text{C})$	186	A
Drain Current – Pulsed		I_{DM}	1000	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		P_{tot}	208	W
Continuous-Source Current		I_S	280	A
Single Pulse Avalanche Energy($V_{DD}=40\text{V}, L=0.1\text{mH}$)		E_{AS}	1605	mJ
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 175	
Thermal resistance, junction - ambient	Steady-State	$R_{\theta JA}$	32.8	/ W
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	0.45	

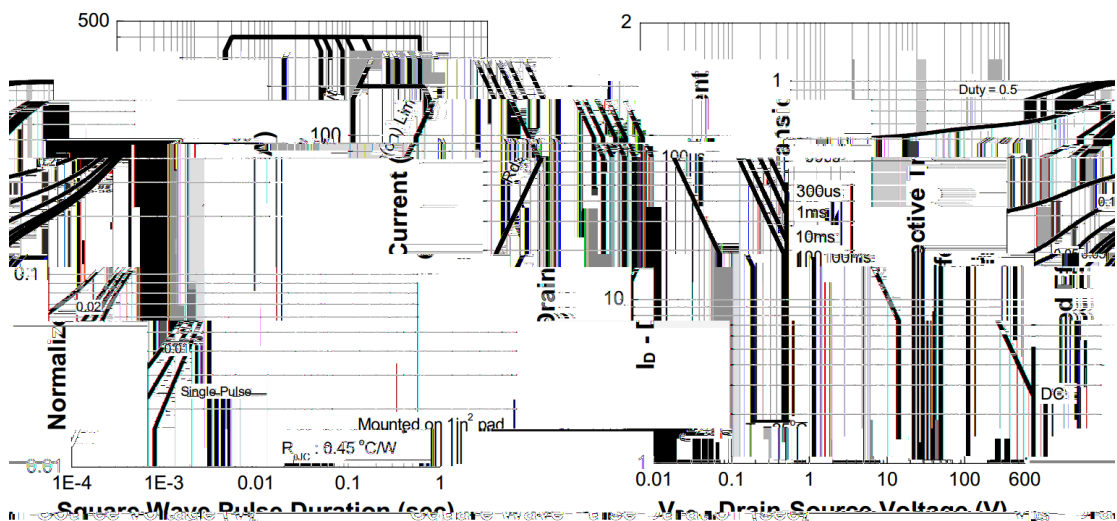
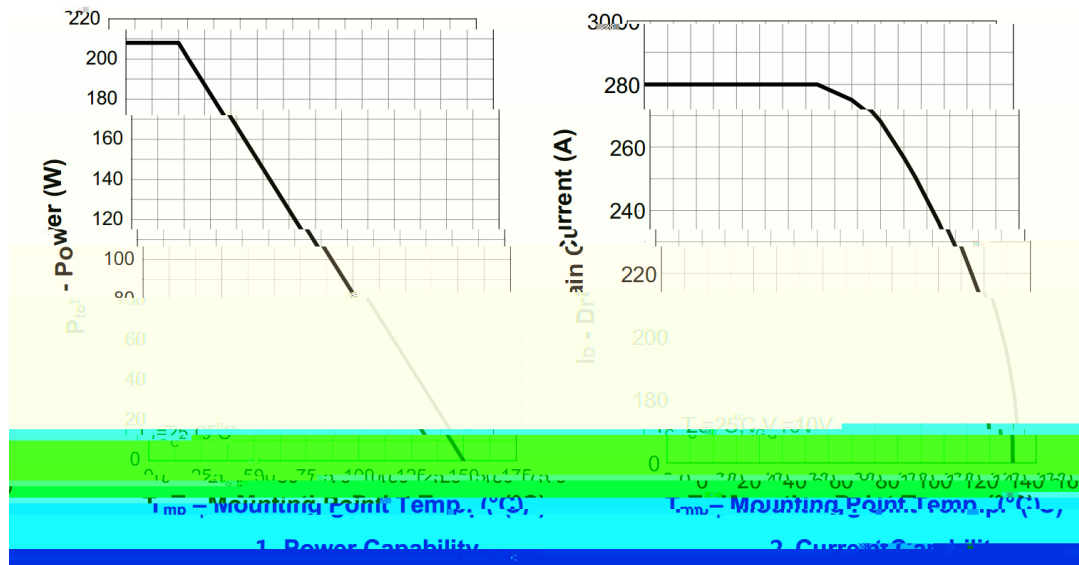
; $\theta_{JA}(DS)T_j$ 10.4958 0 0 10.81496.72 467.0403 TD .0016 T=25ax

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu\text{A}, V_{GS}=0\text{V}$	80	95		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=80\text{V}, V_{GS}=0\text{V}$			1	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}, V_{GS}=\pm 20\text{V}$			± 100	nA

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=40V$ $R_L=1.3\ \Omega$ $R_G=4.5\ \Omega$ $I_{DS}=30A$		32		ns
Turn-On Rise Time	t_r			115		
Turn-Off Delay Time	$t_{d(off)}$			93		
Turn-Off Fall Time	t_f			140		
Reverse Recovery Time	t_{rr}	$I_{DS} = 30\ A, V_{GS} = 0\ V$ $dI_{SD}/dt = 100\ A/\mu s$		80		nS
Reverse Recovery Charge	Q_{rr}			196		nC

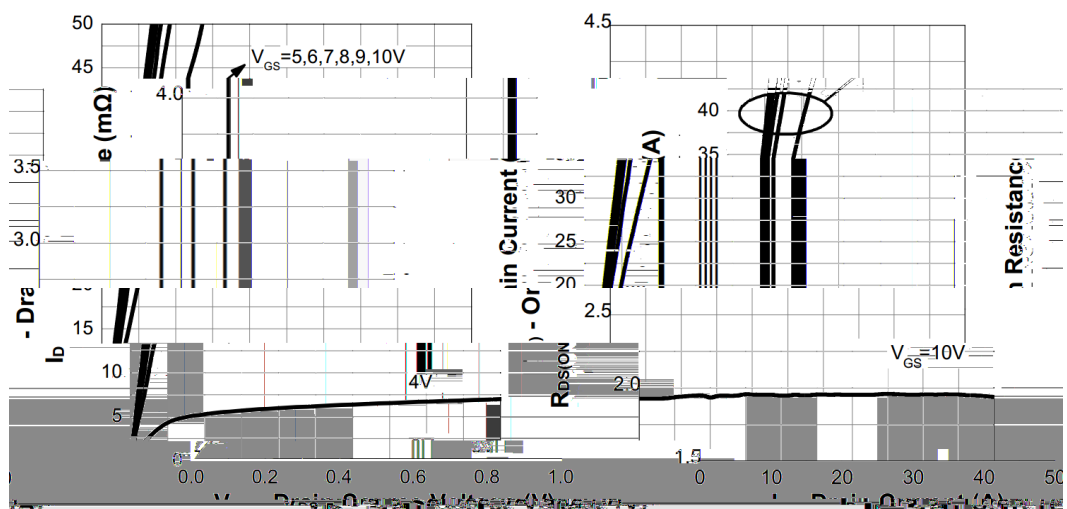
/ Electrical Characteristic Curve



3. Safe Operating Area

4. Transient Thermal Impedance

3. Safe

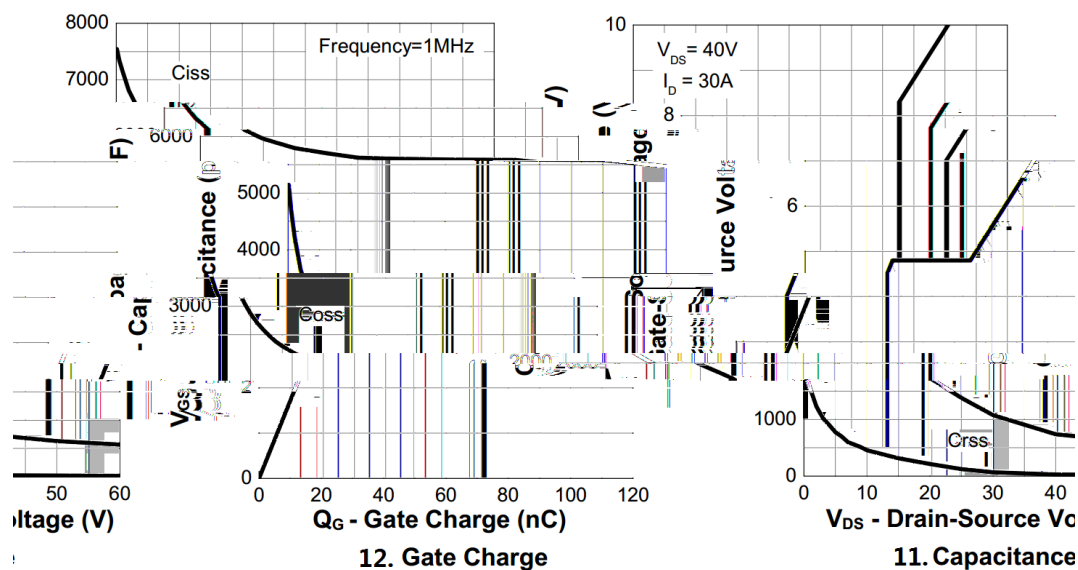
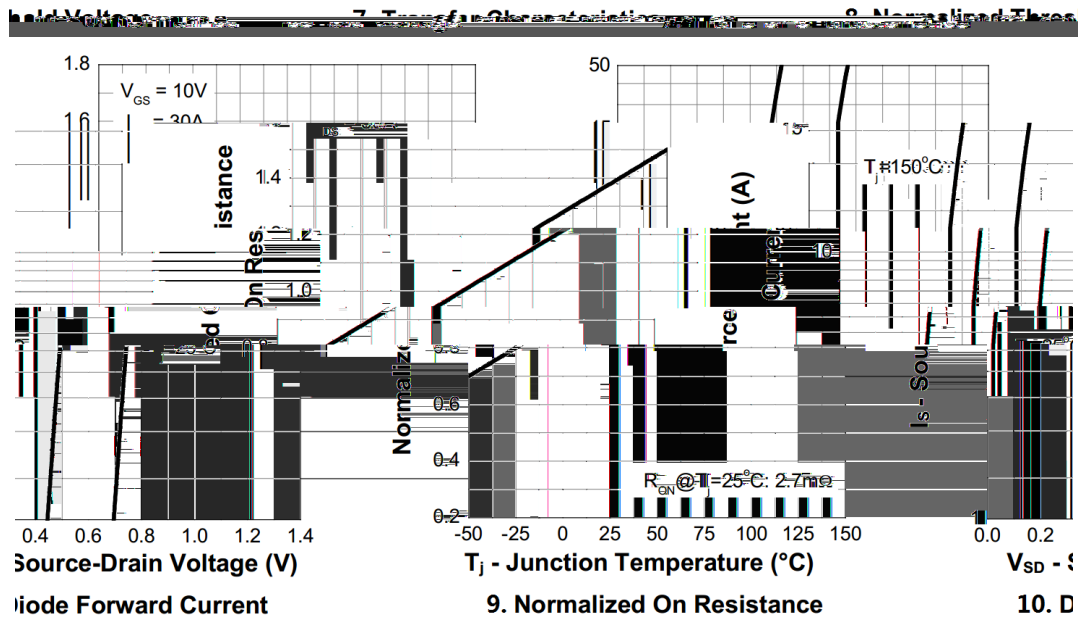
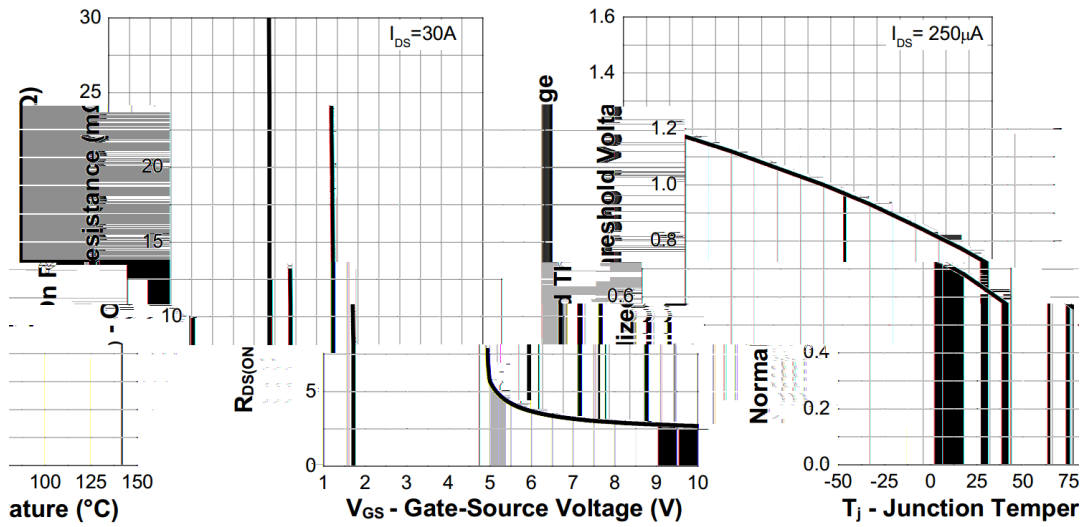


5. Output

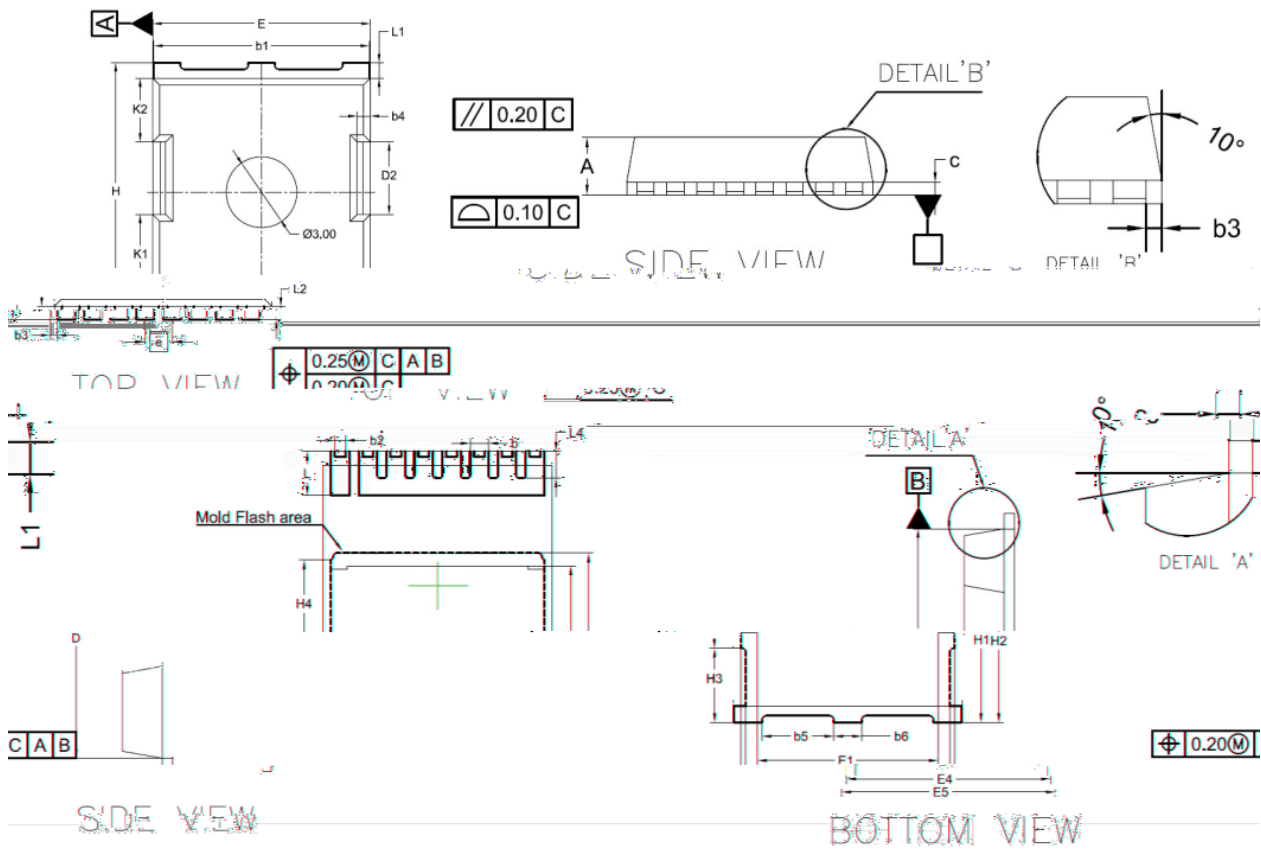
5. Output Characteristics

6. On Resistance

/ Electrical Characteristic Curve

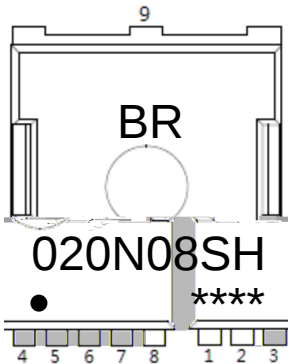


/ Package Dimensions



Symbol	Dimensions In Millimeters			Symbol	Dimensions In Millimeters		
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.

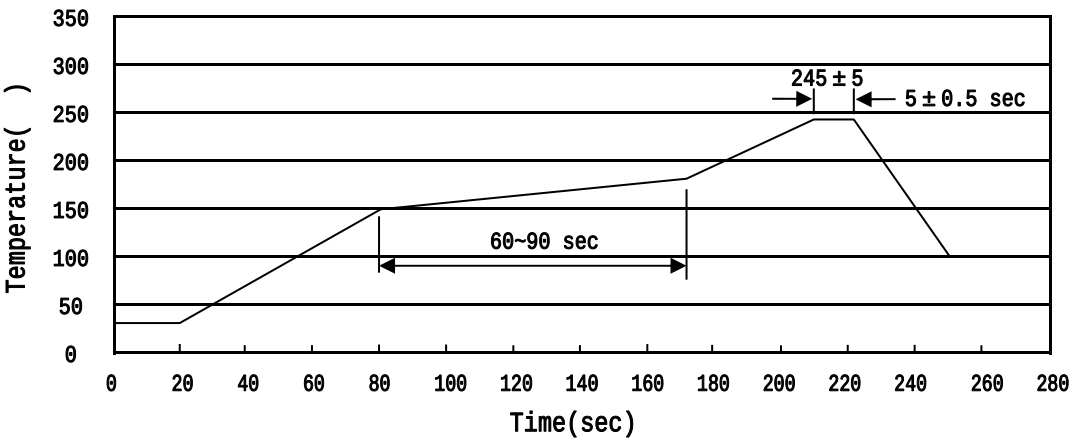
/ Marking Instructions



020N08SH

Note	
BR	Company Code
020N08SH	Product Type Code
****:	Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;

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

245 5

5 0.5sec;

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

2 10 /sec.

3. Cooling Speed: 2~10 °C/sec.

/ Resistance to Soldering Heat Test Conditions

260 ± 5 °C 10 ± 1 sec. Temp.:260±5 °C Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TOLL-8L	2,000	1	2,000	6	12,000	13"×24	360×360×50	380×335×366

/ Notices