

/ Descriptions

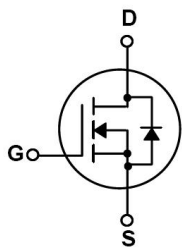
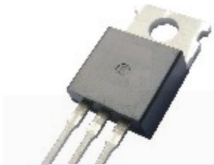
TO-220 N MOS N-CHANNEL MOSFET in a TO-220 Plastic Package.

/ Features

, 100
 Fast Switching, Low ON Resistance, Low Gate Charge, Low Reverse transfer capacitances, 100%
 Single Pulse avalanche energy Test.

/ Applications

UPS
 For UPS, inverters, lightin.

/ Equivalent Circuit**/ Pinning**

1
2
3

PIN1 G

PIN 2 D

PIN 3 S

/ h_{FE} Classifications & Marking

See Marking Instructions.

BR40N20
Rev.F Jul.-2018

/ Electrical Characteristics(Ta=25)

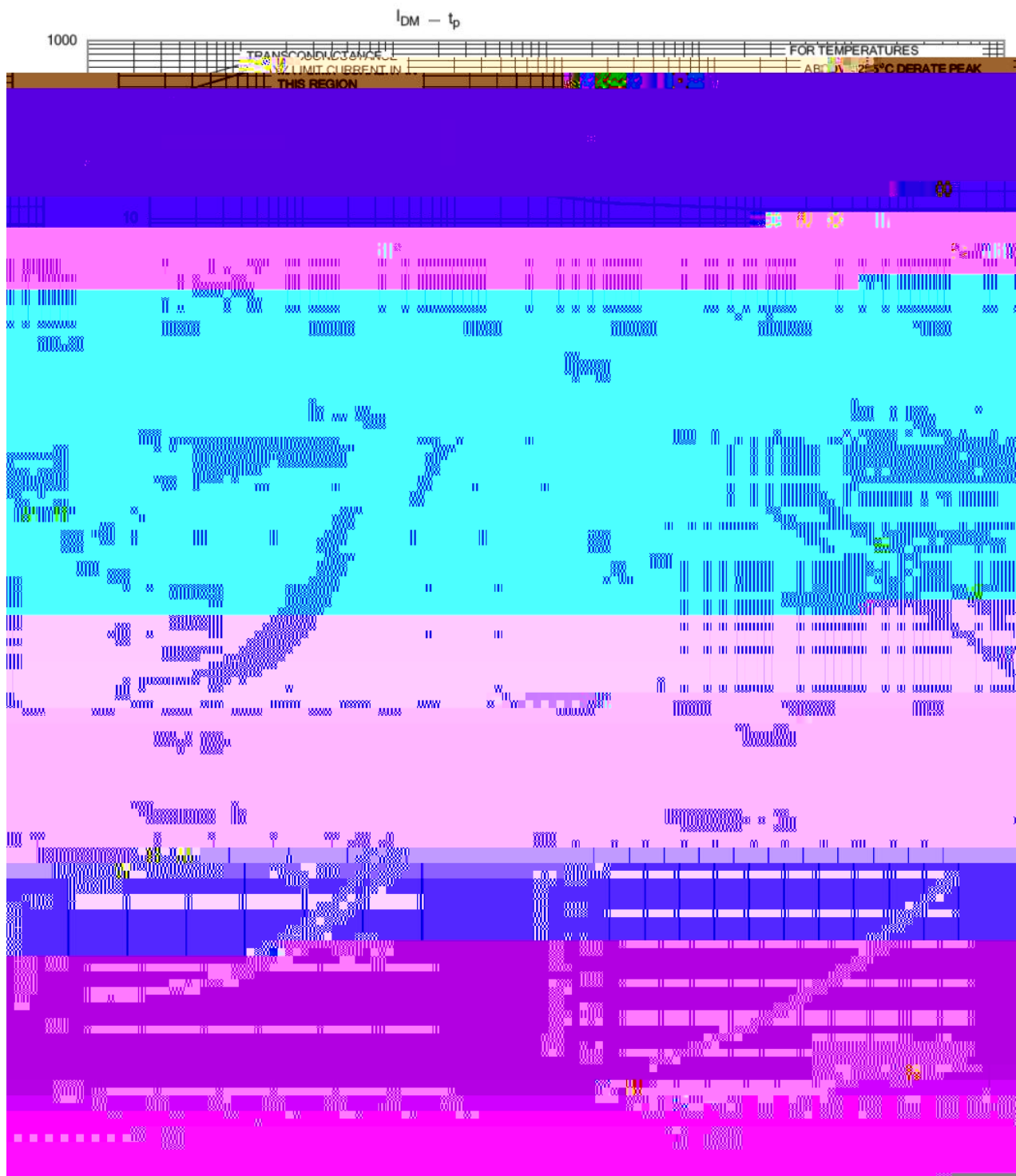
Total Gate Charge	Q_g	$I_D=20A \quad V_{DD}=100V$ $V_{GS} = 10V$		68		nC
Gate-Source Charge	Q_{gs}			17		
Gate-Drain Charge	Q_{gd}			16		
Continuous Source Current	I_S				40	A
Maximum Pulsed Current	I_{SM}				160	A
Diode Forward Voltage	V_{SD}	$I_S=40A \quad V_{GS}=0V$			1.5	V
Reverse Recovery Time	t_{rr}	$I_S=20A \quad T_j=25$ $dI_F/dt=100A/us, V_{GS}=0V$		250		ns
Reverse Recovery Charge	Q_{rr}			1.5		μC

Notes:

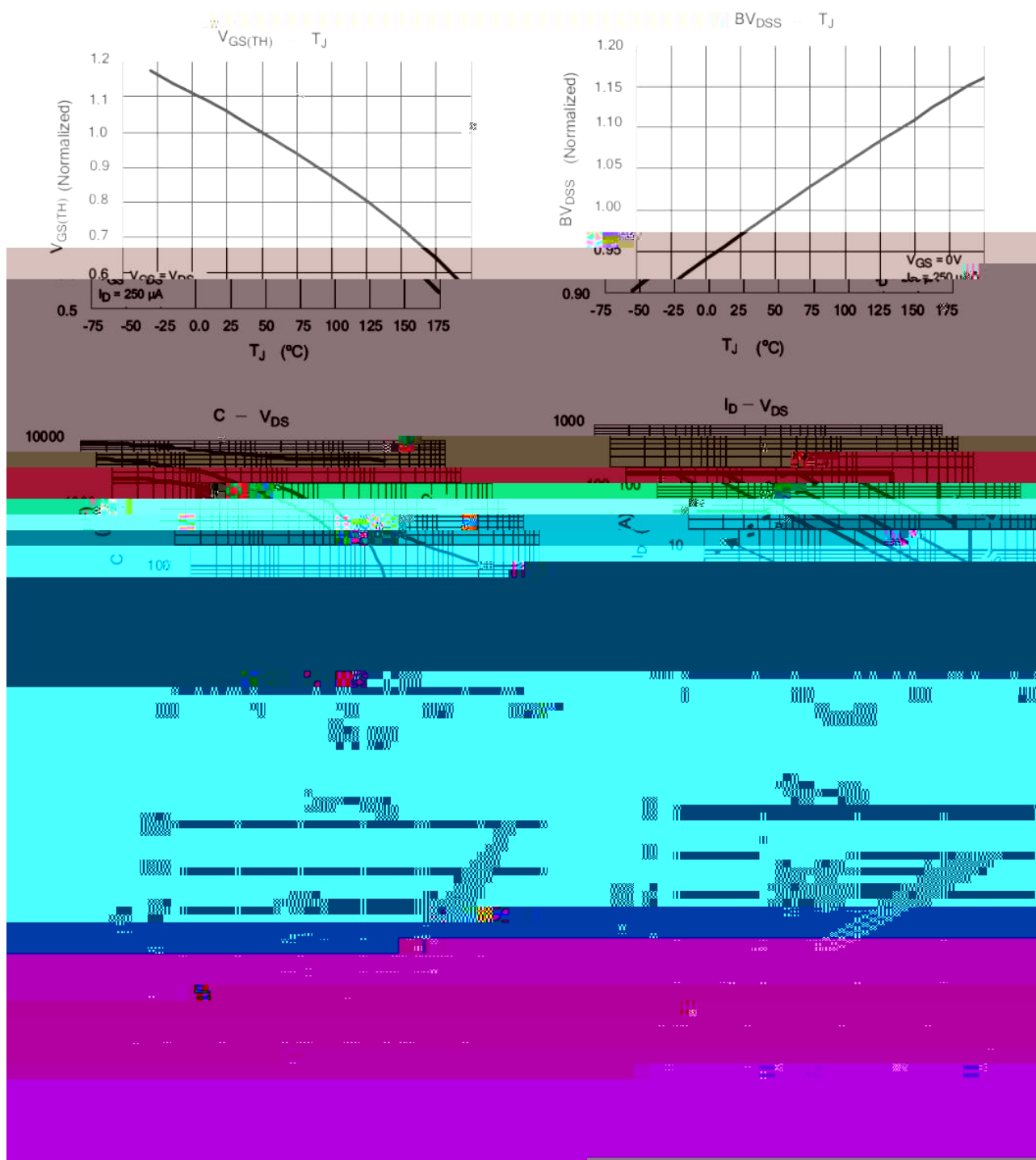
a1 $L=1.0mH, I_D=31.6A, \text{ Start } T_j=25$

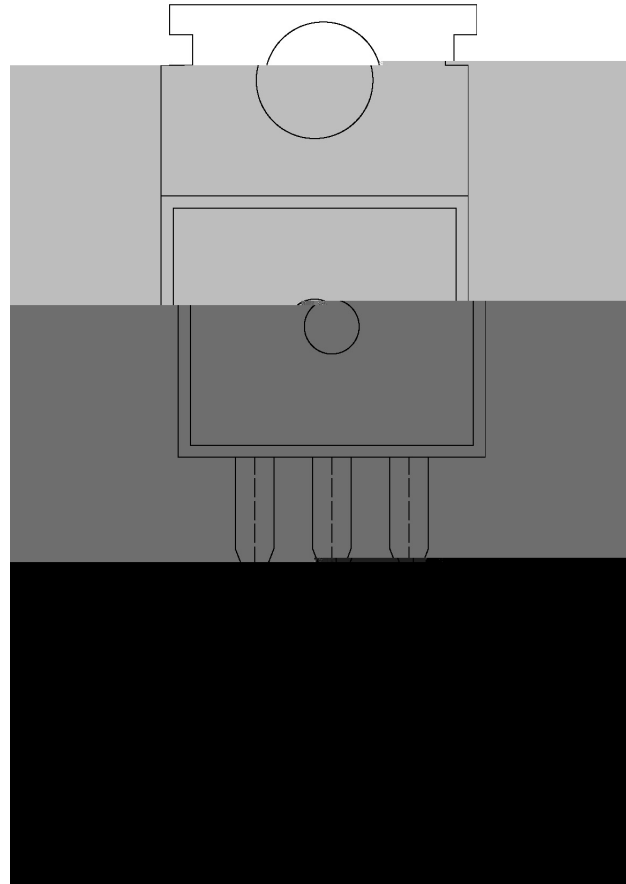
a2 $I_{SD} = 10A, di/dt \leq 100A/us, V_{DD} \leq B_{VDS}, \text{ Start } T_j=25$

/ Electrical Characteristic Curve

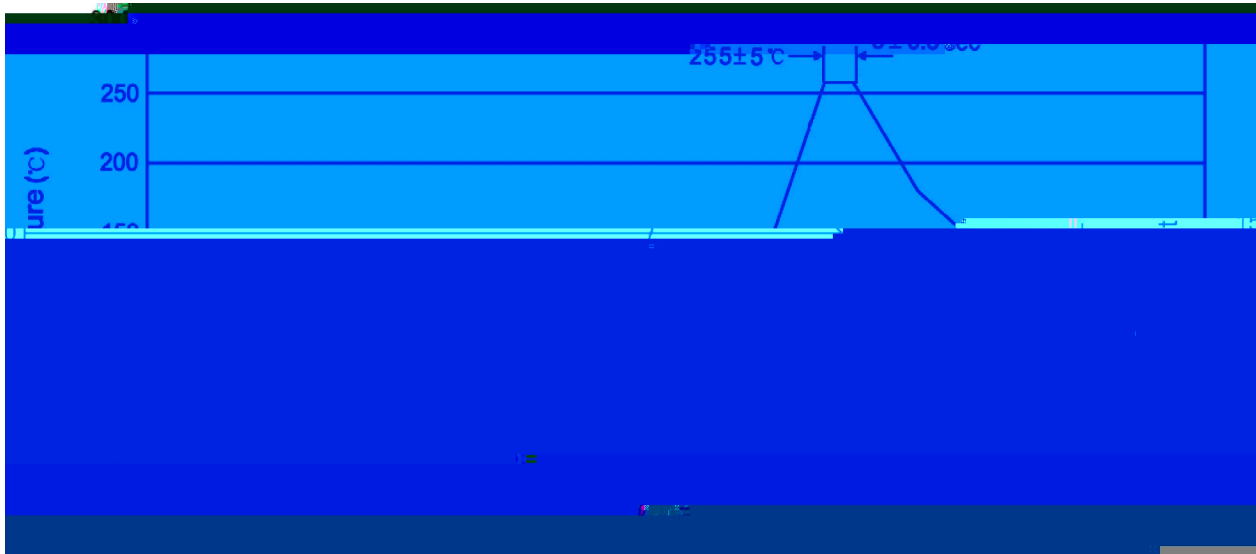


/ Electrical Characteristic Curve





() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. | |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension		(unit mm ³)

/ TUBE

Package Type	Units					Dimension		(unit mm ³)

/ Notices