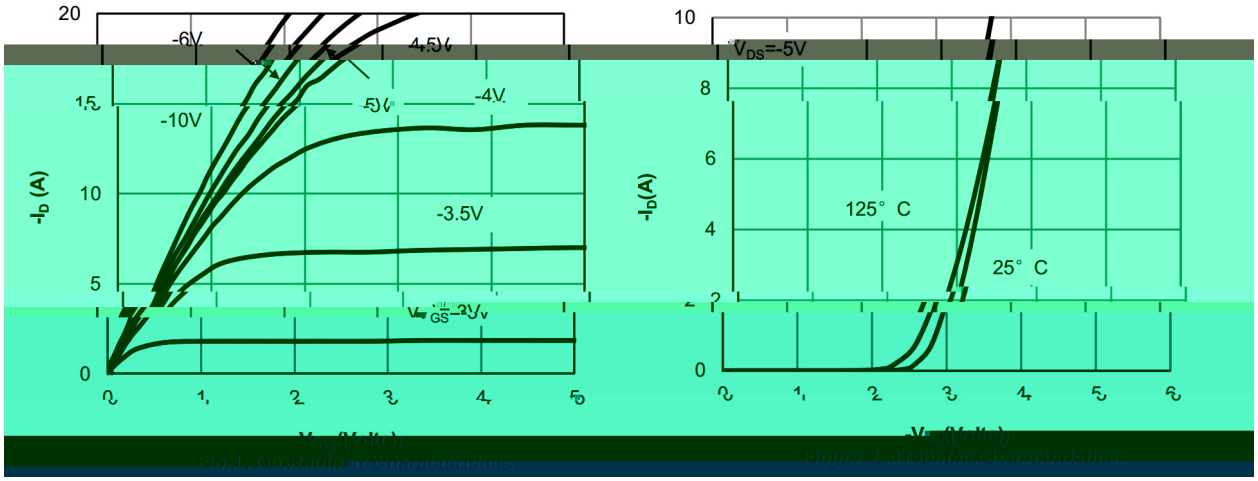
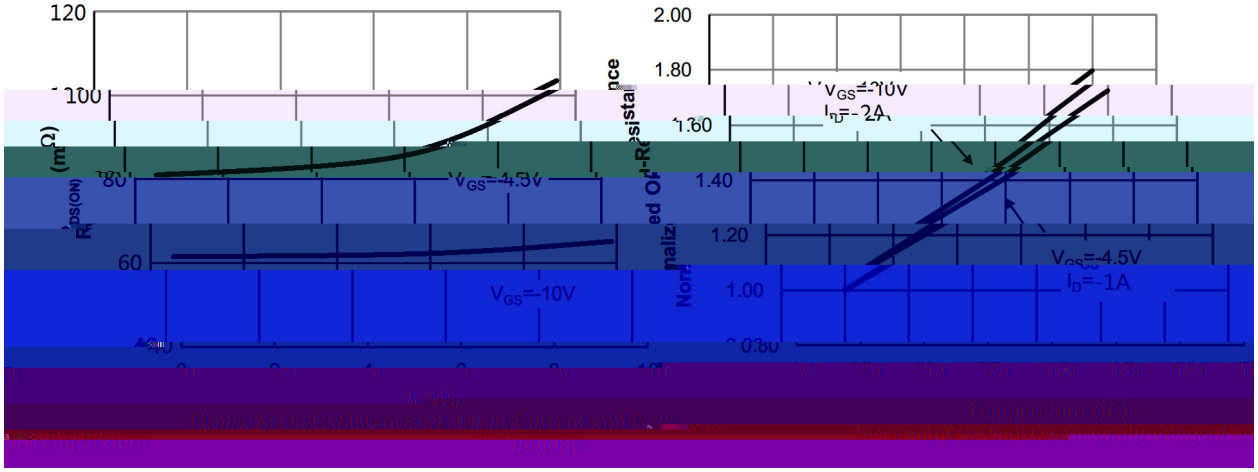
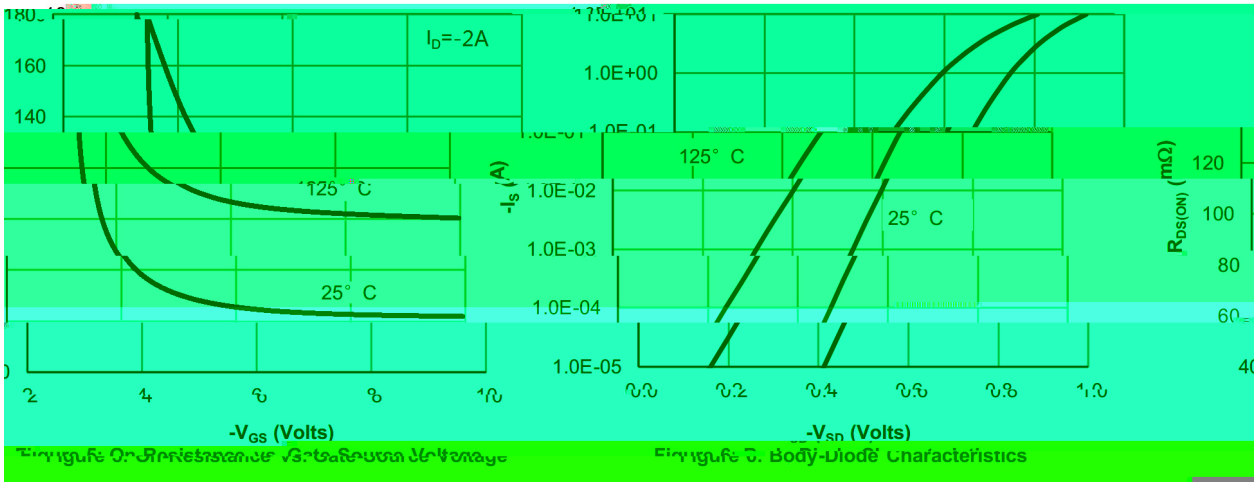
| Parameter | | Symbol | Rating | Unit |
|---|---|---|---|---|
| Drain–Source Voltage | | $V_{DSS}$ | -60 | V |
| Gate–Body Leakage Voltage | | $V_{GSS}$ | ±20 | V |
| Drain Current - Continuous | | $I_D$ | -6 | A |
| Power Dissipation (Surface Mounted on FR4 Board, t ≤ 10 sec.) | | $P_D$ | 5.3 | W |
| Operating and Storage Temperature Range | | $T_J$,$T_{STG}$ | -55～150 | |
| Maximum Junction-to-Ambient | t ≤ 10s | $R_{\theta JA}$ | 40 | ℃/W |
| Maximum Junction-to-Ambient | Steady-State | | 75 | ℃/W |
| Maximum Junction-to-Lead | Steady-State | $R_{\theta JL}$ | 23.5 | ℃/W |

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Drain–Source Breakdown Voltage | $V_{(BR)DSS}$ | $V_{GS}$=0V $I_D$=-250μA | -60 | -71 | | V |
| Gate Threshold Voltage | $V_{GS(th)}$ | $V_{DS}$=$V_{GS}$ $I_D$=-250μA | -1 | -2.1 | -3 | V |
| Static Drain–Source On–Resistance | $R_{DS(on)}$ | $V_{GS}$=-10V $I_D$=-2A | | 61 | 80 | mΩ |
| | | $V_{GS}$=-4.5V $I_D$=-1A | | 77 | 120 | mΩ |
| Zero Gate Voltage Drain Current | $I_{DSS}$ | $V_{DS}$=-60V $V_{GS}$=0V | | | -1.0 | μA |
| Gate–Body Leakage. | $I_{GSS}$ | $V_{GS}$=-20V | | | -100 | nA |
| | | $V_{GS}$=20V | | | 100 | nA |
| Drain-Source Diode Forward Voltage | $V_{SD}$ | $V_{GS}$=0V $I_S$=-1A $T_J$=25 | | | -1.2 | V |
| Input Capacitance | $C_{iss}$ | $V_{DS}$=-25V $V_{GS}$=0V f=1.0MHz | | 1600 | | pF |
| Output Capacitance | $C_{oss}$ | | | 400 | | |
| Reverse Transfer Capacitance | $C_{rss}$ | | | 300 | | |
| Total Gate Charge | $Q_{g(10V)}$ | $V_{DS}$=-30V $V_{GS}$=-10.0V $I_D$=-4A | | 18 | | nC |
| Total Gate Charge | $Q_{g(4.5V)}$ | | | 9.1 | | |
| Gate-to-Source Charge | $Q_{gs}$ | | | 2.7 | | |
| Gate-to-Drain Charge | $Q_{gd}$ | | | 3.1 | | |
| Turn–On Delay Time | $t_{d(on)}$ | $V_{DD}$=-30V $V_{GS}$ | | | | |

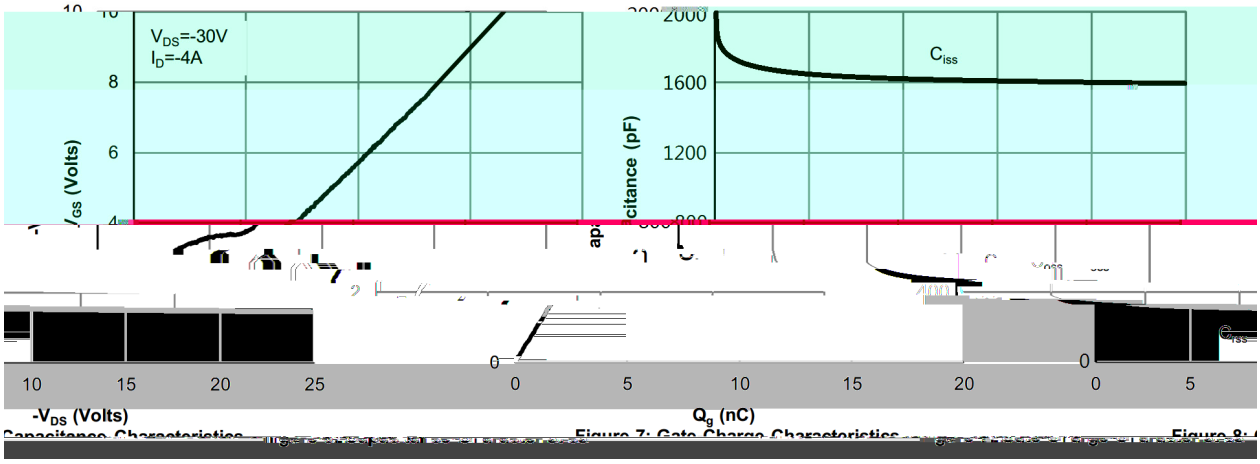
## / Electrical Characteristic Curve



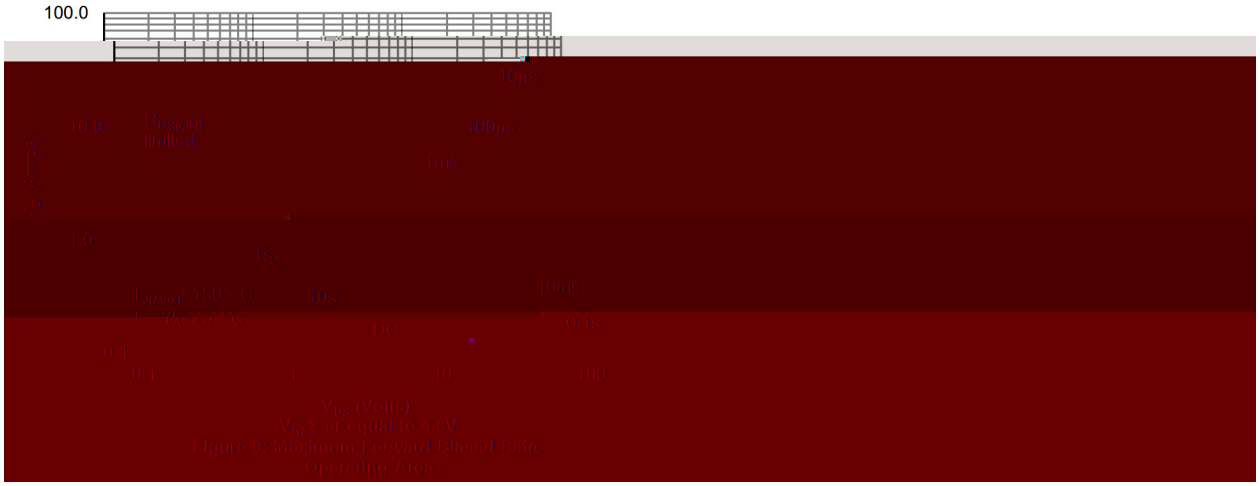



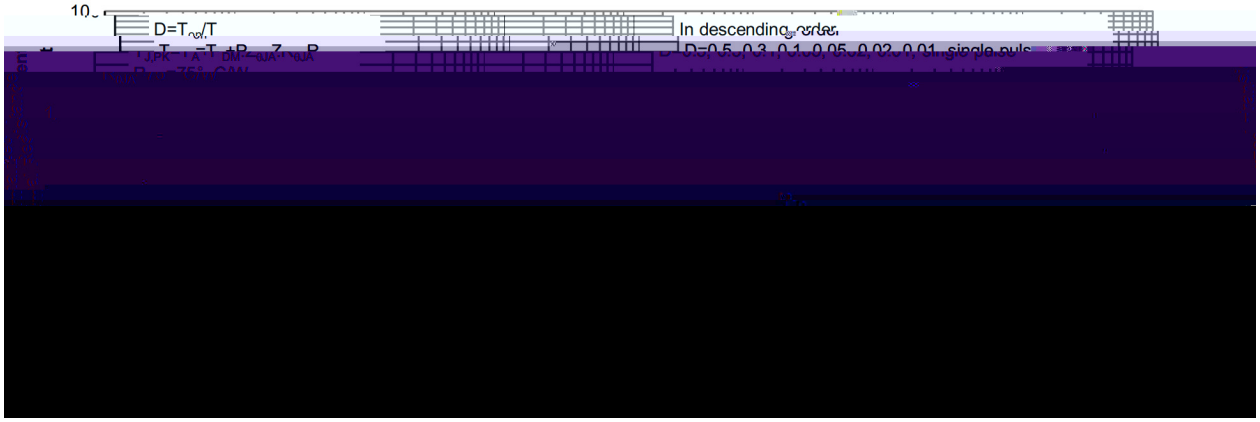
## / Electrical Characteristic Curve



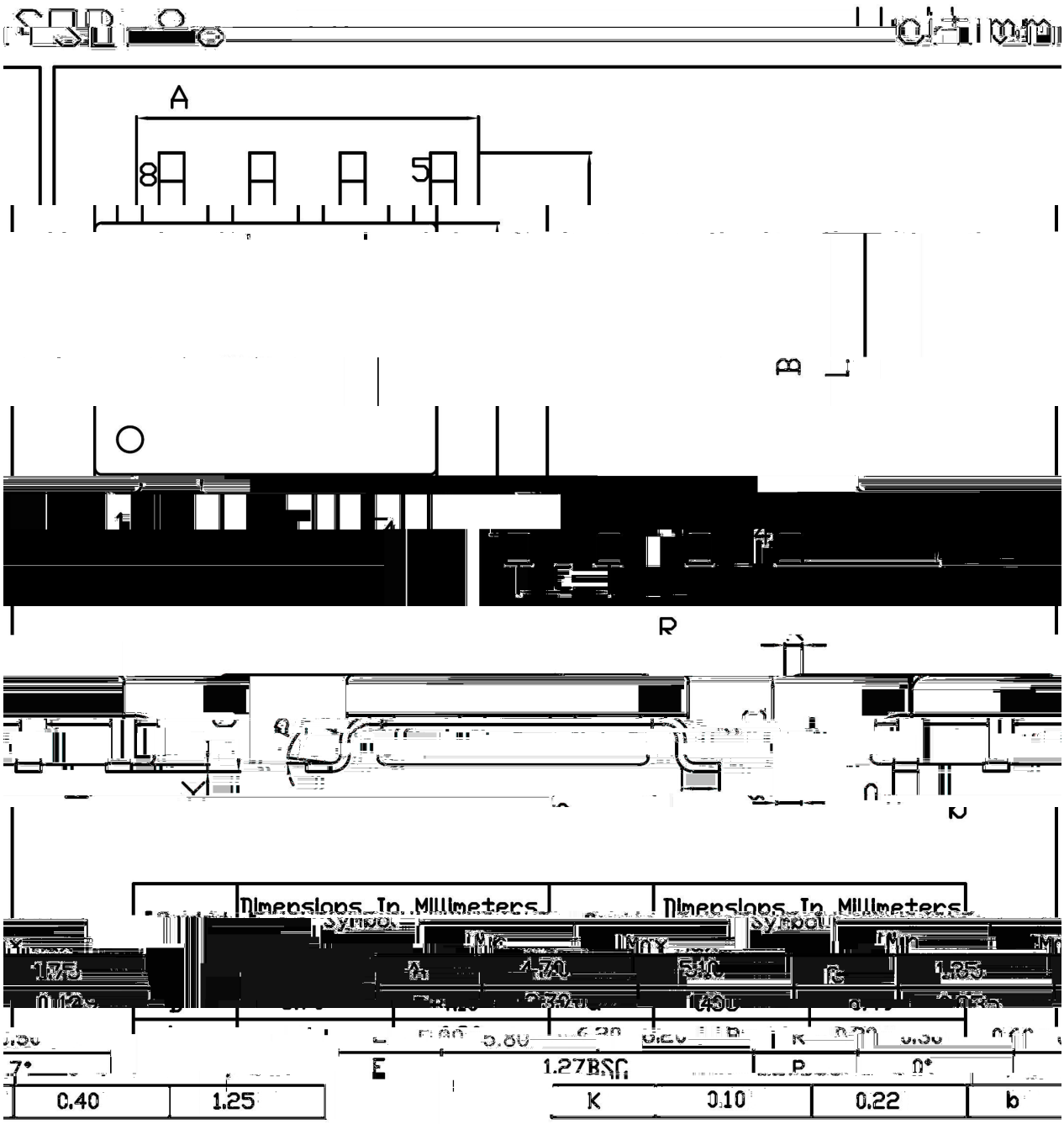

Capacitance Characteristics Figure 7: Gate Charge Characteristics Figure 8:



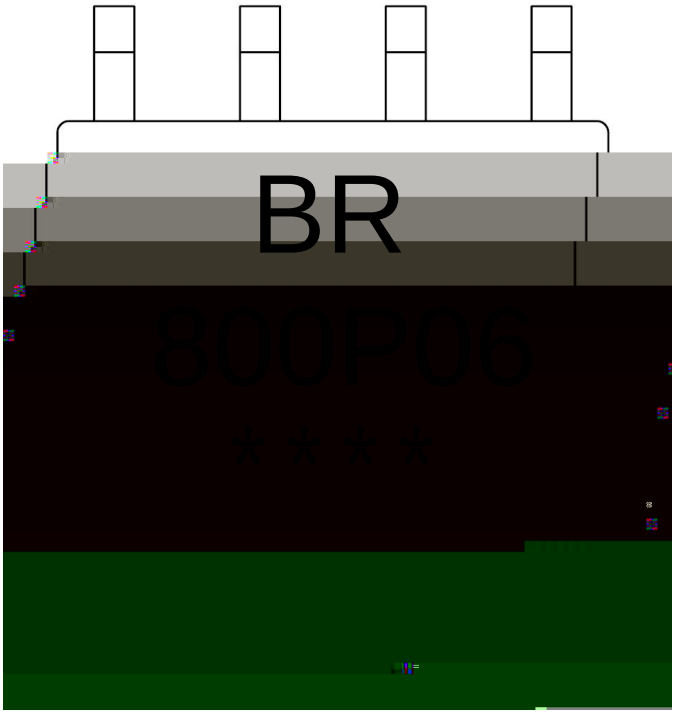

$V_{GS}$ or equal to 4.5V
Figure 9: Maximum Forward Biased Safe Operating Area



## / Package Dimensions



## / Marking Instructions




BR

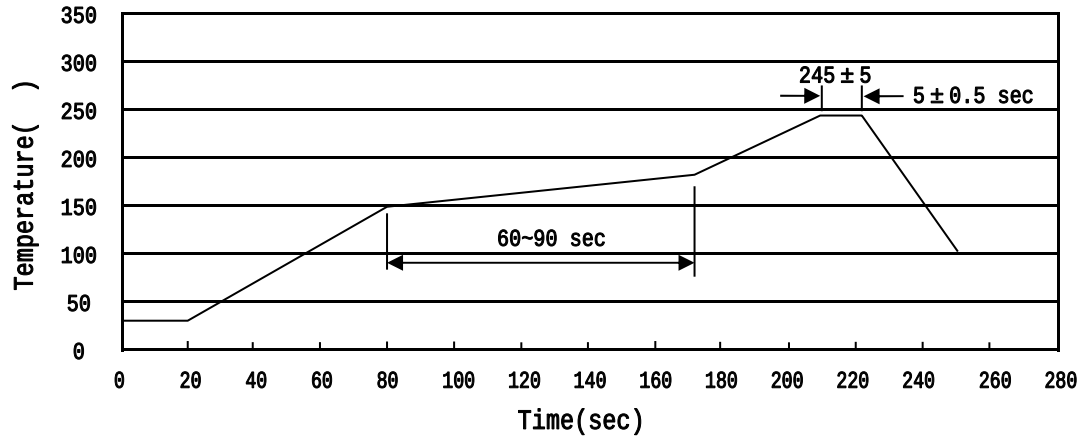
800P06

****

Note:

| | |
|---|---|
| BR: | Company Code |
| 800P06: | Product Type |
| ****: | 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 , 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 mm³) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| SOP/ESOP-8 | 4,000 | 2 | 8,000 | 6 | 48,000 | 13 ×12 | 360×360×50 | 380×335×366 |

## / Notices