

/ Descriptions

SOP-8 互补增强型 MOS 管  
Complementary Enhancement MOSFET in a SOP-8 Plastic Package.

/ Features

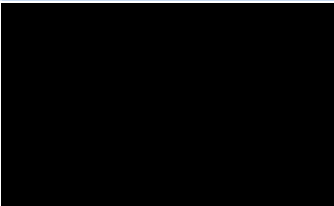
|                                         |                                          |
|-----------------------------------------|------------------------------------------|
| N-channel                               | P-channel                                |
| $V_{DS}(V)=40V$                         | $V_{DS}(V)=-40V$                         |
| $I_D=8A(T_C=25\text{ }^{\circ}C)$       | $I_D=-7A(T_C=25\text{ }^{\circ}C)$       |
| $U_{GS+RQ}, ?58\text{ pF}+Y_{JV}@43Y,$  | $U_{GS+RQ}, ?68\text{ pF}+Y_{JV}@043Y,$  |
| $U_{GS+RQ}, ?78\text{ pF}+Y_{JV}@718Y,$ | $U_{GS+RQ}, ?93\text{ pF}+Y_{JV}@0718Y,$ |
| 高频产品。                                   |                                          |

/ Applications

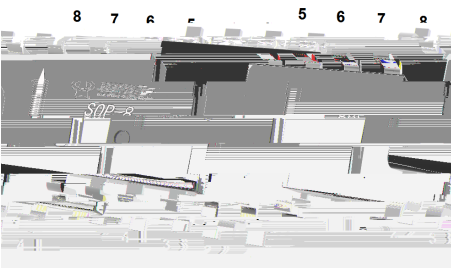
这些器件非常适合用于高效率开关 DC/DC 转换器和开关模式电源。并且适用于用作负载开关或在 PWM 应用中。

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies. And suitable for use as a load switch or in PWM applications.

/ Equivalent Circuit



/ Pinning



|            |            |            |            |
|------------|------------|------------|------------|
| PIN 1 X S1 | PIN 2 X G1 | PIN 3 X S2 | PIN 4 X G2 |
| PIN 5 X D2 | PIN 6 X D2 | PIN 7 X D1 | PIN 8 X D1 |

/ Marking

见“标记”  
See Marking Instructions.


**1 Absolute Maximum Ratings(Ta=25℃)**

| Parameter                              | Symbol                       | Rating              |           | Unit |
|----------------------------------------|------------------------------|---------------------|-----------|------|
|                                        |                              | N-channel           | P-channel |      |
| Drain-Source Voltage                   | $V_{DS}$                     | 40                  | -40       | V    |
| Gate-Source Voltage                    | $V_{GS}$                     | $\pm 20$            |           | V    |
| Continuous Drain Current               | $I_D (T_C=25^\circ\text{C})$ | 8                   | -7        | A    |
| Continuous Drain Current               | $I_D (T_A=25^\circ\text{C})$ | 6                   | -5        | A    |
| Pulsed Drain Current                   | $I_{DM}$                     | 20                  | -20       | A    |
| Power Dissipation                      | $P_D (T_C=25^\circ\text{C})$ | 3.5                 | 3.5       | W    |
| Power Dissipation                      | $P_D (T_A=25^\circ\text{C})$ | 2                   | 2         | W    |
| Maximum Junction-to-Ambient            | $R_{\theta JA}$              | $t \leq 10\text{s}$ |           | /W   |
|                                        | $R_{\theta JA}$              | Steady-State        |           | /W   |
| Maximum Junction-to-Case               | $R_{\theta JC}$              | Steady-State        |           | /W   |
| Junction and Storage Temperature Range | $T_J, T_{STG}$               | -55 to +150         |           |      |

**BRCS4614SC**

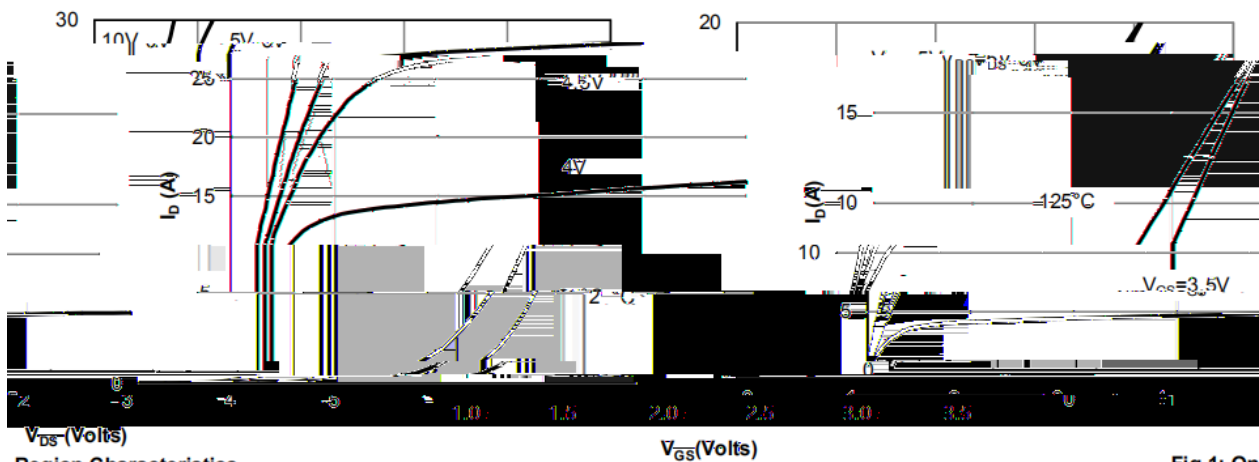
**N- / N-CHANNEL Electrical Characteristic Curve**


Fig 1: On

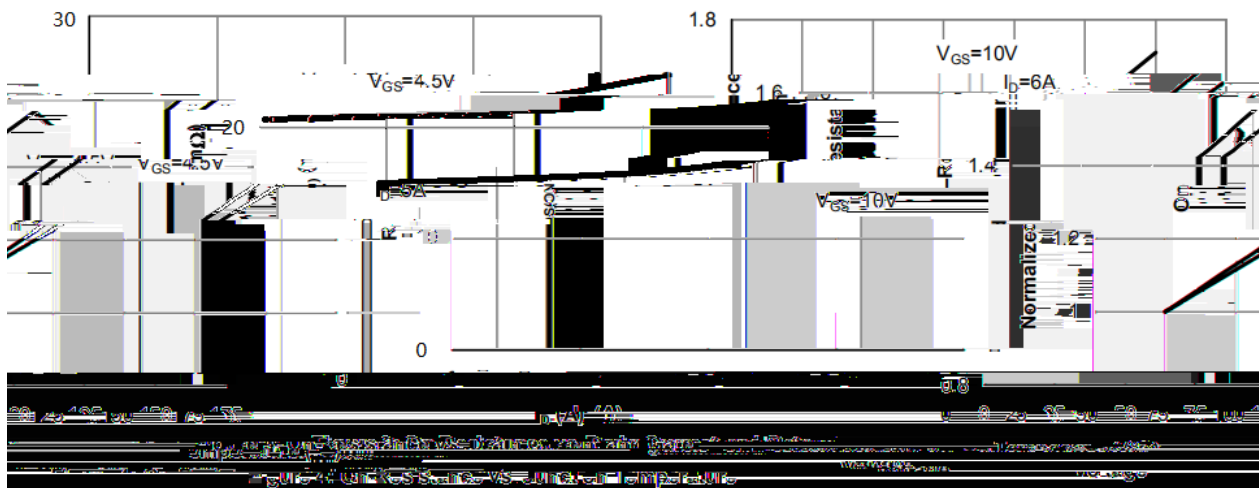
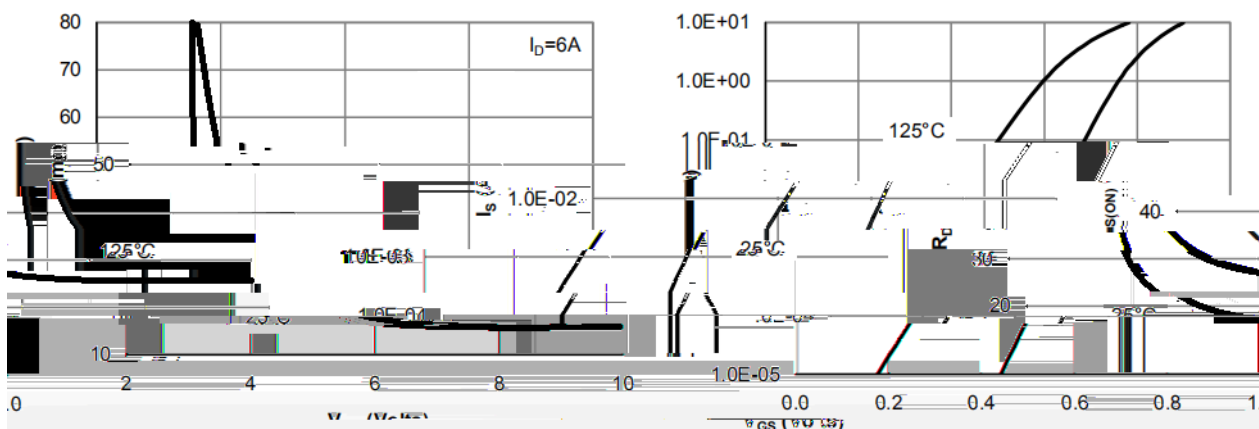


Figure 3: On-Region Characteristics

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

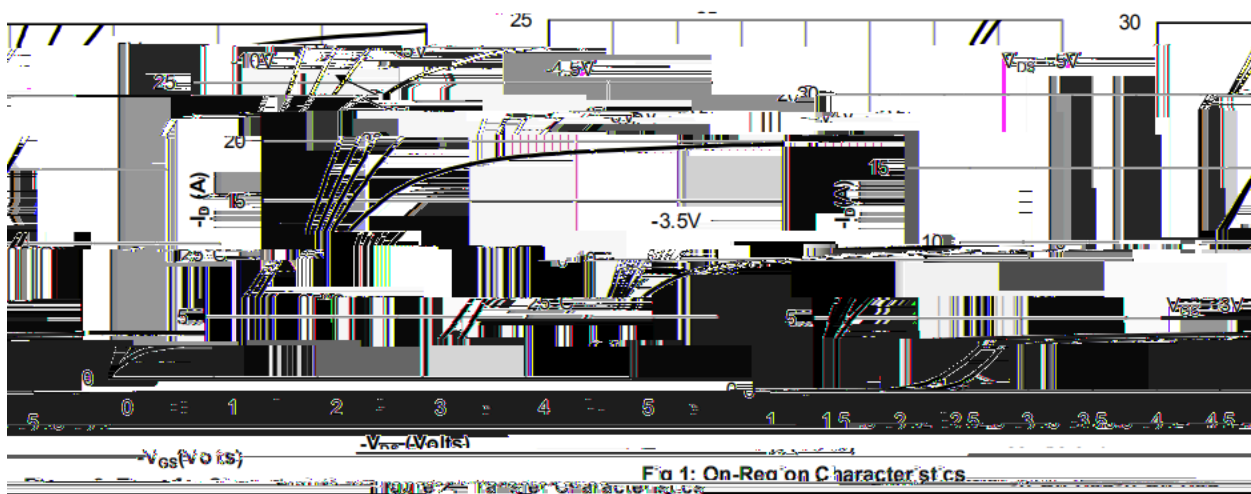
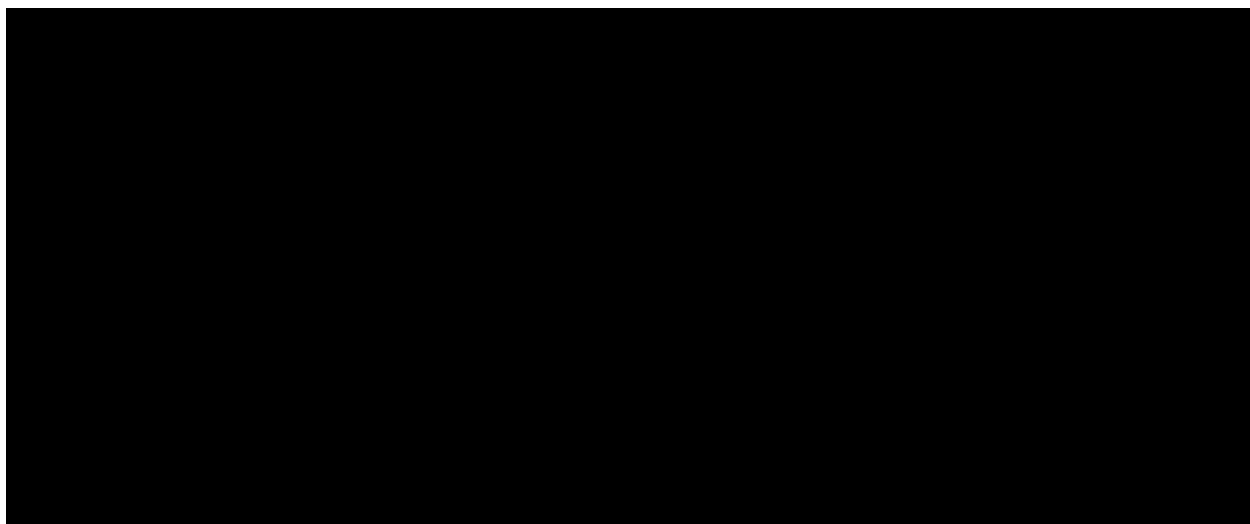
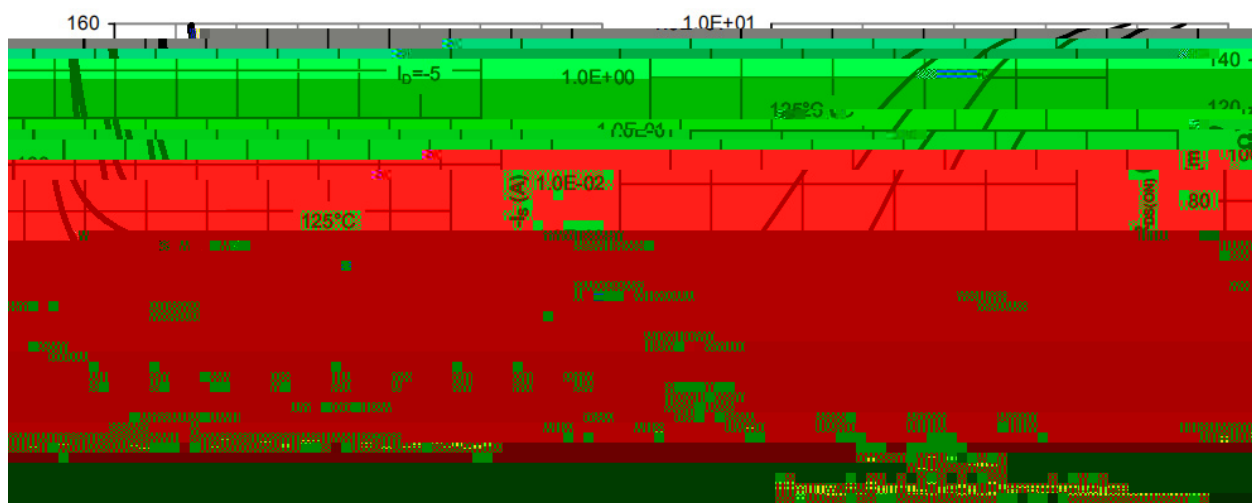
Figure



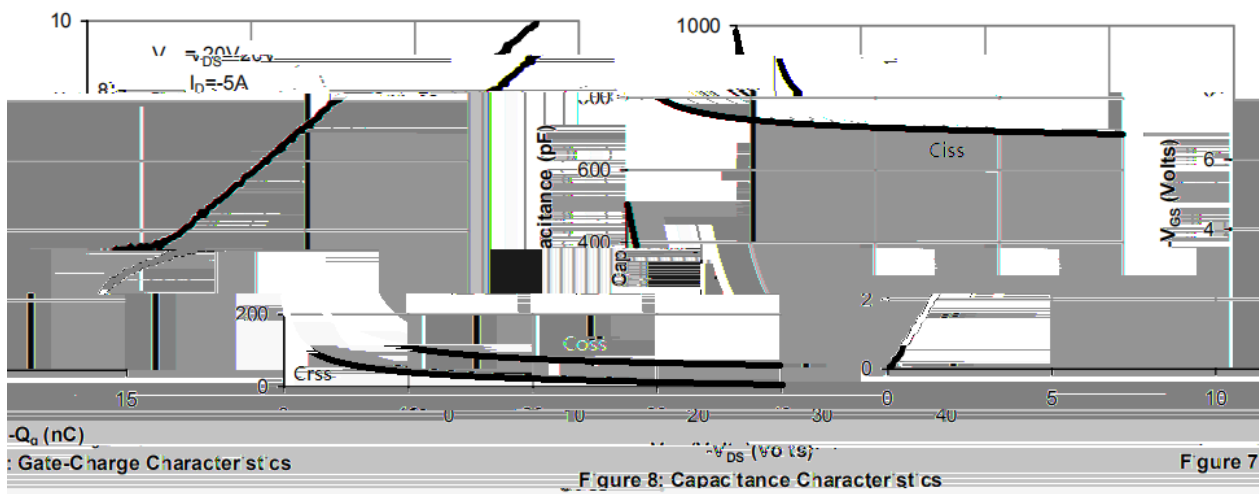
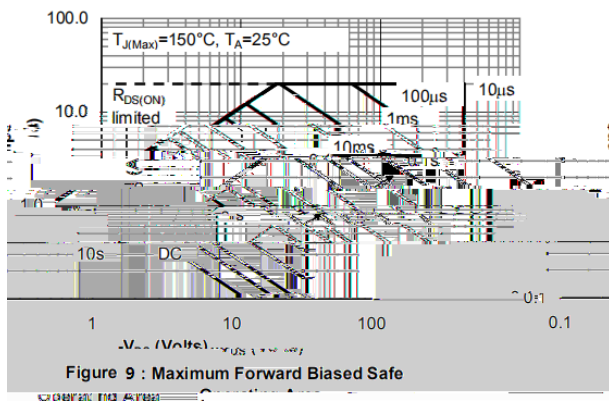
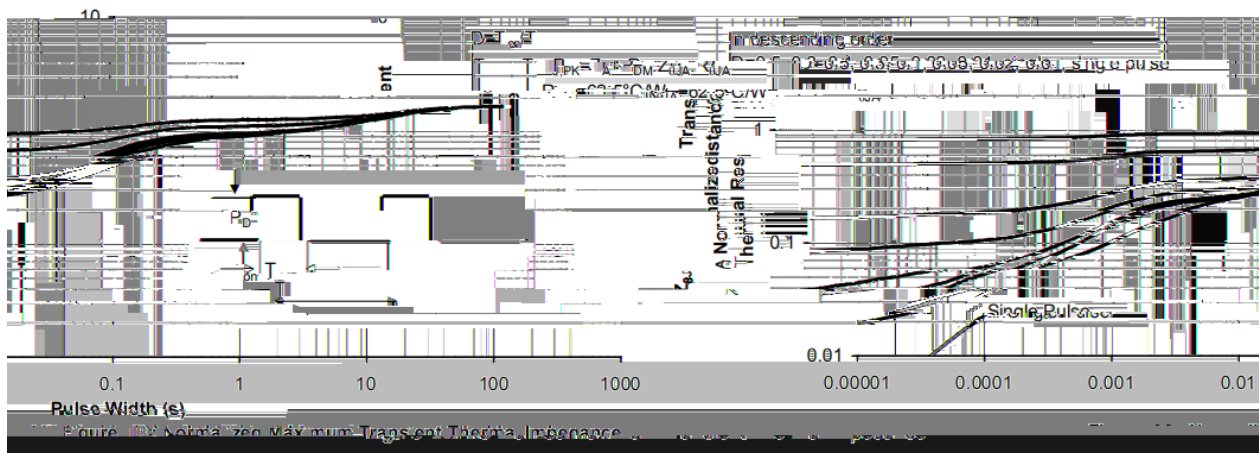


| Parameter                         | Symbol       | Test Conditions                       | Min  | Typ  | Max       | Unit       |
|-----------------------------------|--------------|---------------------------------------|------|------|-----------|------------|
| Drain-Source Breakdown Voltage    | $BV_{DSS}$   | $V_{GS}=0V$ $I_D=-250\mu A$           | -40  | -46  |           | V          |
| Zero Gate Voltage Drain Current   | $I_{DSS}$    | $V_{DS}=-40V$ $V_{GS}=0V$             |      |      | -1.0      | $\mu A$    |
|                                   |              | $V_{DS}=-40V$ $V_{GS}=0V$<br>$T_J=55$ |      |      | -5.0      | $\mu A$    |
| Gate-Body leakage current         | $I_{GSS}$    | $V_{GS}=\pm 20V$ $V_{DS}=0V$          |      |      | $\pm 100$ | nA         |
| Gate Threshold Voltage            | $V_{GS(th)}$ | $V_{DS}=V_{GS}$ $I_D=-250\mu A$       | -1.4 | -1.6 | -3.0      | V          |
| On state drain current            | $I_{D(on)}$  | $V_{DS}=-5V$ $V_{GS}=-10V$            | 6    |      |           | A          |
| Static Drain-Source On-Resistance | $R_{DS(on)}$ | $V_{GS}=-10V$ $I_D=-5.0A$             |      | 32   | 35        | m $\Omega$ |
|                                   |              | $V_{GS}=-4.5V$ $I_D=-2.0A$            |      | 49   | 60        | m $\Omega$ |
| Forward Transconductance          | $g_{FS}$     | V                                     |      |      |           |            |

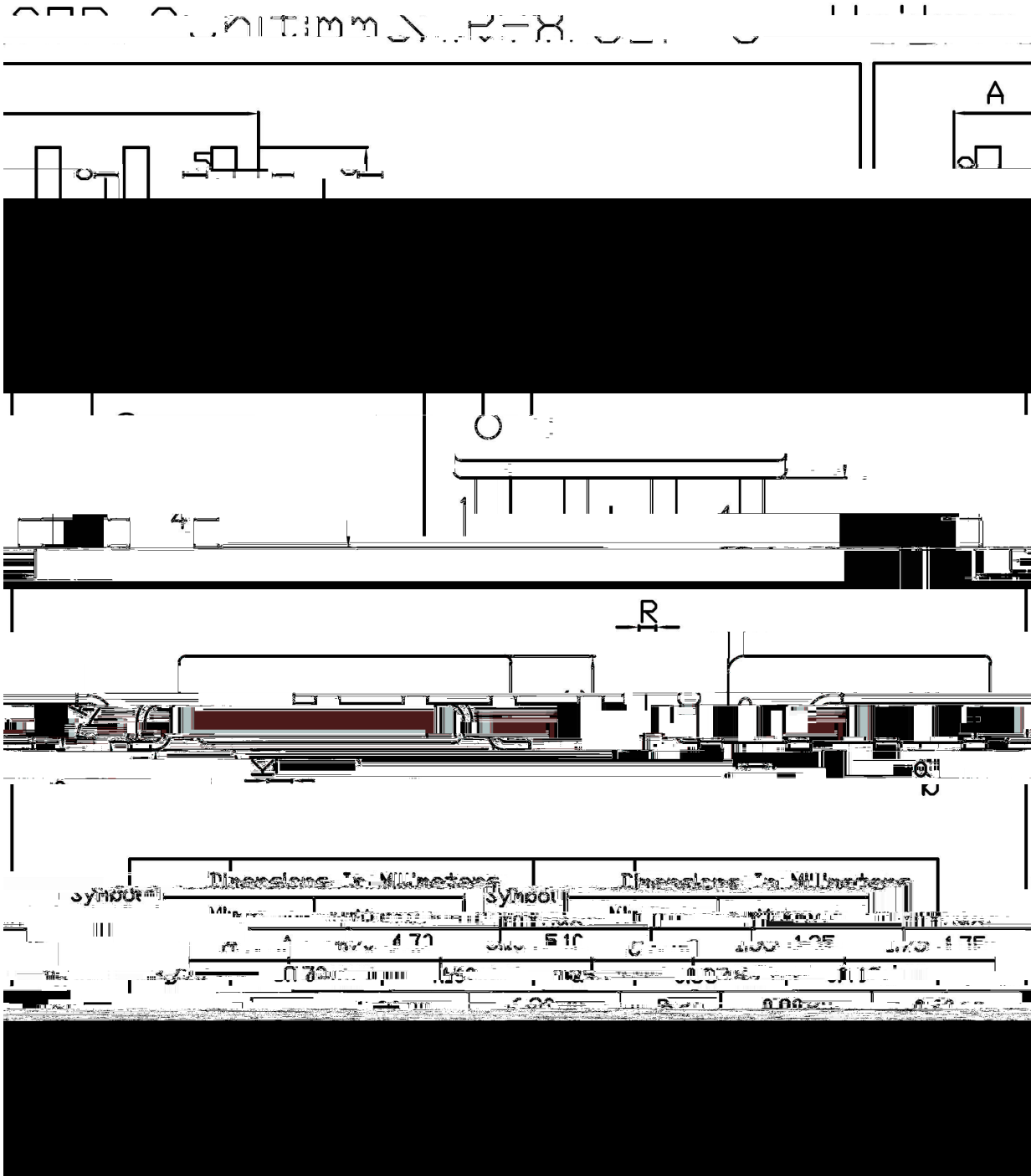
P- / P-CHANNEL Electrical Characteristic Curve



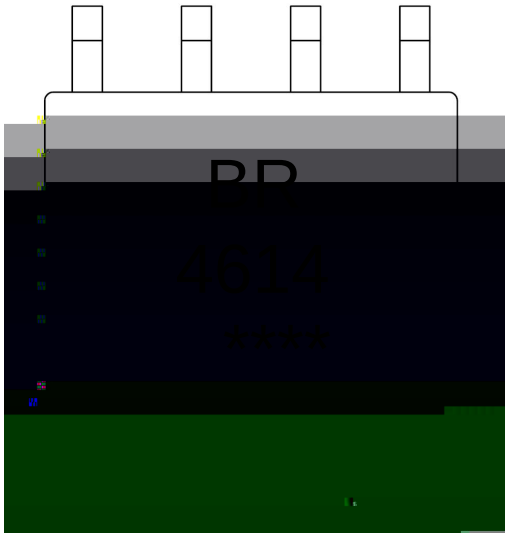
P- / P-CHANNEL Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



|       |                                       |
|-------|---------------------------------------|
| BR    | 公司代码                                  |
| 4614  | 产品型号代码                                |
| ****  | 批次号代码，批次号变化时批次号代码随之变化                 |
| Note: |                                       |
| BR:   | Company Code                          |
| 4614: | Product Type Code                     |
| ****: | Lot No. Code, code change with Lot No |

