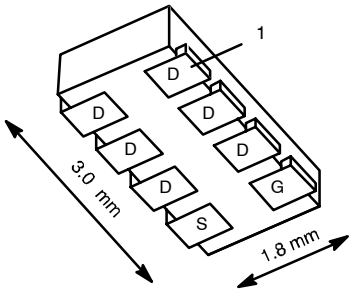
# N-Channel 30-V (D-S) MOSFET

| PRODUCT SUMMARY | | |
|---|---|---|
| $V_{DS}$ (V) | $r_{DS(on)}$ (Ω) | $I_D$ (A) |
| 30 | 0.035 @ $V_{GS}$ = 10 V | ±6.7 |
| | 0.055 @ $V_{GS}$ = 4.5 V | ±5.3 |

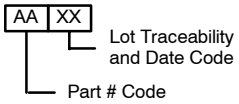
TrenchFET® Power MOSFETs

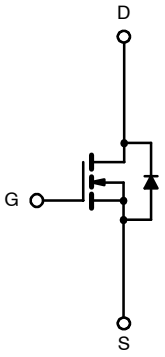
**1206-8 ChipFET™**




Bottom View

Marking Code




N-Channel MOSFET

**Ordering Information:** Si5402DC-T1

| ABSOLUTE MAXIMUM RATINGS ($T_A$ = 25°C UNLESS OTHERWISE NOTED) | | | | | |
|---|---|---|---|---|---|
| Parameter | | Symbol | 5 secs | Steady State | Unit |
| Drain-Source Voltage | | $V_{DS}$ | 30 | | V |
| Gate-Source Voltage | | $V_{GS}$ | ±20 | | |
| Continuous Drain Current ($T_J$ = 150°C)[a] | $T_A$ = 25°C | $I_D$ | ±6.7 | ±4.9 | A |
| | $T_A$ = 85°C | | ±4.8 | ±3.5 | |
| Pulsed Drain Current | | $I_{DM}$ | ±20 | | |
| Continuous Source Current (Diode Conduction)[a] | | $I_S$ | 2.1 | 1.1 | |
| Maximum Power Dissipation[a] | $T_A$ = 25°C | $P_D$ | 2.5 | 1.3 | W |
| | $T_A$ = 85°C | | 1.3 | 0.7 | |
| Operating Junction and Storage Temperature Range | | $T_J$, $T_{stg}$ | −55 to 150 | | °C |
| Soldering Recommendations (Peak Temperature)[b, c] | | | 260 | | |

| THERMAL RESISTANCE RATINGS | | | | | |
|---|---|---|---|---|---|
| Parameter | | Symbol | Typical | Maximum | Unit |
| Maximum Junction-to-Ambient[a] | t ≤ 5 sec | $R_{thJA}$ | 40 | 50 | °C/W |
| | Steady State | | 80 | 95 | |
| Maximum Junction-to-Foot (Drain) | Steady State | $R_{thJF}$ | 15 | 20 | |

Notes
a. Surface Mounted on 1" x 1" FR4 Board.
b. See Reliability Manual for profile. The ChipFET is a leadless package. The end of the lead terminal is exposed copper (not plated) as a result of the singulation process in manufacturing. A solder fillet at the exposed copper tip cannot be guaranteed and is not required to ensure adequate bottom side solder interconnection.
c. Rework Conditions: manual soldering with a soldering iron is not recommended for leadless components.