

Dual N-Channel Enhancement Mode MOSFET

DESCRIPTION

The VIC1562 is the n-channel logic enhancement mode power field effect transistor is produced using high cell density, which provide excellent RDSON and gate charge for most of the synchronous buck converter applications .

These devices are particularly suited for low voltage application, and low in-line power loss are needed in a very small outline surface mount package.

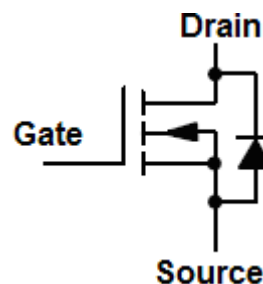
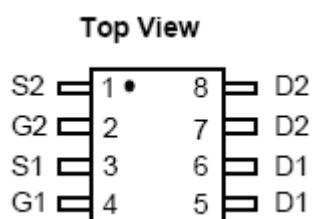
FEATURE

- ◆ $V_{DS}=60V; V_{GS}=\pm 20V; I_D=10A$
- ◆ $R_{DS(ON)}=25m\Omega$ (TYP.)@ $V_{GS}=10V$
- ◆ $R_{DS(ON)}=31m\Omega$ (TYP.)@ $V_{GS}=4.5V$

APPLICATIONS

- ◆ Power Management in Notebook
- ◆ Potable Equipment
- ◆ Battery Powered System
- ◆ DC/DC Converter
- ◆ Load Switch、 DSC LCD Display inverter

PIN CONFIGURATION



ABSOLUTE MAXIMUM RATINGS(TA=25°C Unless otherwise noted)

| Symbol | Parameter | Rating | | Unit |
|--------|--|------------|----|------|
| VDS | Drain-Source Voltage | 60 | | V |
| VGS | Gate-Source Voltage | ±20 | | |
| ID | Continuous Drain Current (25 [±]) | VGS=10V | 10 | A |
| | Continuous Drain Current (100 [±]) | VGS=10V | 7 | A |
| IDP | Power Dissipation | 30 | | A |
| TJ | Maximum Junction Temperature | 150 | | °C |
| TSTG | Storage Temperature Range | -55 to 150 | | |
| PD | Maximum Power Dissipation (Ta=25°C) | 2.5 | | W |



● ELECTRICAL CHARACTERISTICS(TA=25°C Unless otherwise noted)

| Symbol | Parameter | Test Conditions | VIC1562DQ | | | Unit |
|---|----------------------------------|---|-----------|------|------|------|
| | | | Min. | Typ. | Max. | |
| Static Characteristics | | | | | | |
| BV _{DSS} | Drain-Source Breakdown Voltage | V _{GS} =0V, I _{DS} =10μA | 60 | -- | -- | V |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} =60V, V _{GS} =0V | -- | -- | 1 | μA |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} =V _{GS} , I _{DS} =250μA | 1.0 | -- | 2.5 | V |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} =±20V, V _{DS} =0V | -- | -- | ±10 | μA |
| g _{fs} | Forward Transconductance | V _{DS} =5V, I _D =5A | -- | 20 | -- | s |
| R _{DS(ON) a} | Drain-Source On-state Resistance | V _{GS} =10V, I _D =4A | -- | 25 | 35 | mΩ |
| | | V _{GS} =4.5V, I _D =2A | -- | 31 | 40 | |
| Dynamic b | | | | | | |
| Q _g | Total Gate Charge | V _{GS} =4.5V, V _{DS} =48V, I _{DS} =6A | -- | 12.5 | -- | nC |
| Q _{gs} | Gate-Source Charge | | -- | 3.25 | -- | |
| Q _{gd} | Gate-Drain Charge | | -- | 6.45 | -- | |
| C _{iss} | Input Capacitance | V _{DS} =15V, V _{GS} =0V, f=1MHz | -- | 1399 | -- | pF |
| C _{oss} | Output Capacitance | | -- | 94 | -- | |
| C _{rss} | Reverse Transfer Capacitance | | -- | 73 | -- | |
| SWITCHING CHARACTERISTICS | | | | | | |
| t _{d(ON)} | Turn-on Delay Time | V _{DD} =48V, R _L =10Ω, I _{DS} =-1.0A, V _{GEN} =4.5V, R _G =6Ω | -- | 8 | -- | ns |
| t _{d(OFF)} | Turn-off Delay Time | | -- | 24.5 | -- | |
| DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS | | | | | | |
| V _{sD a} | Diode Forward Voltage | I _s = 300mA, V _{GS} =0V | -- | 0.8 | 1.2 | V |

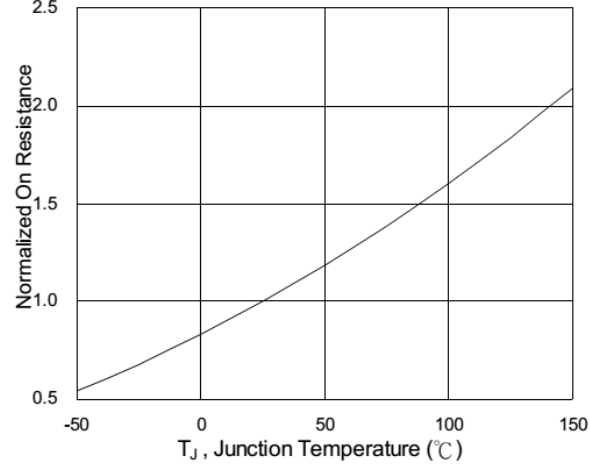
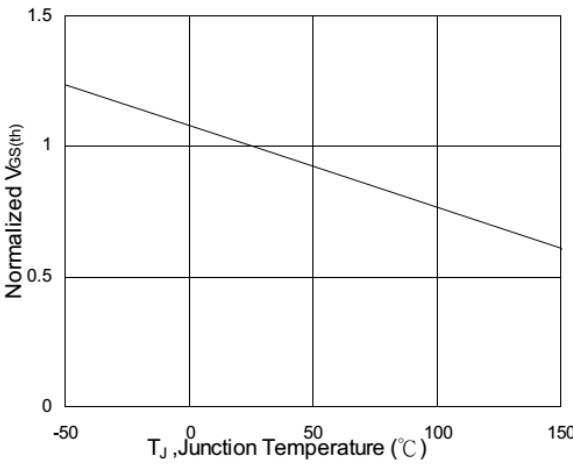
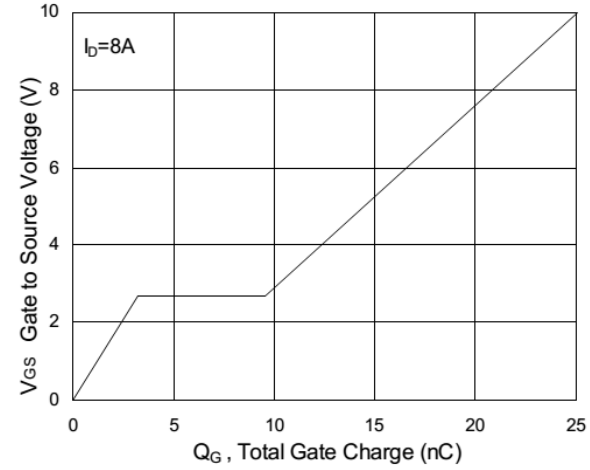
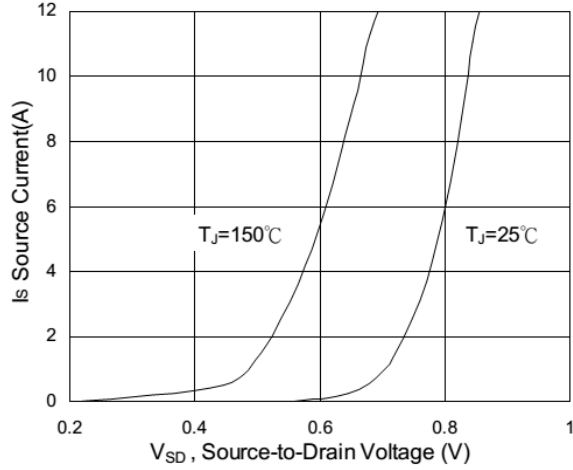
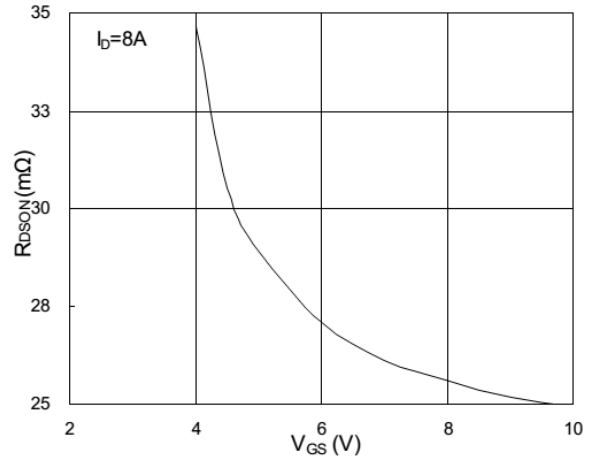
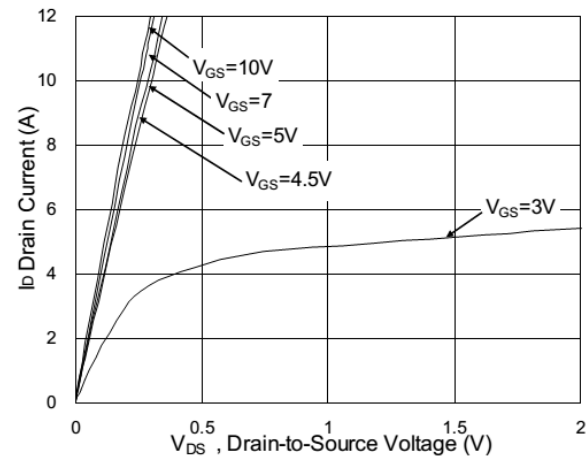
Notes:

- a. Pulse test; pulse width ≤ 10μs, duty cycle ≤ 1%
- b. When mounted on a 1*0.75*0.062 inch glass epoxy board%

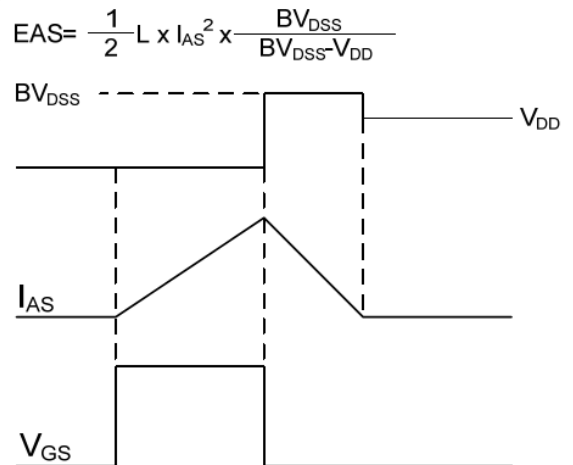
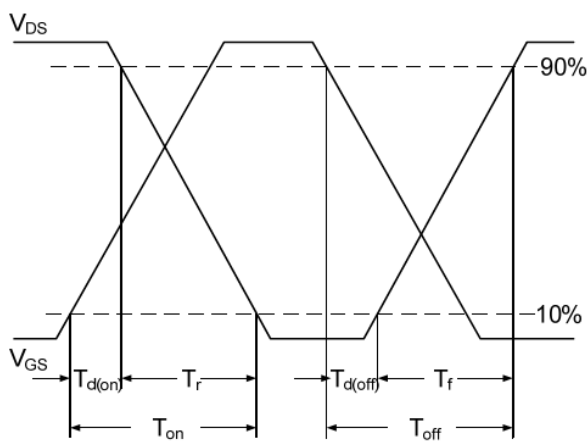
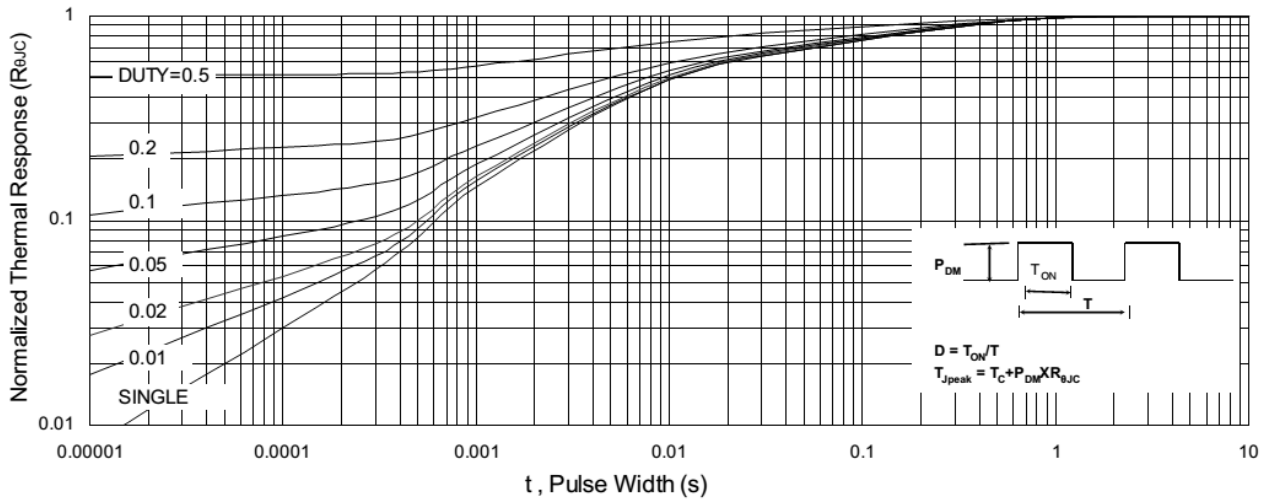
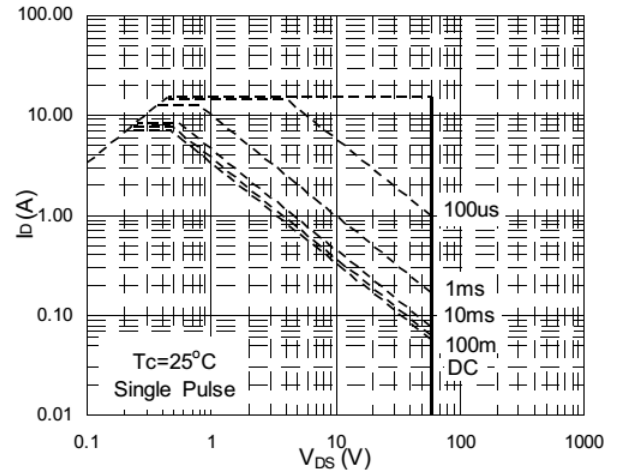
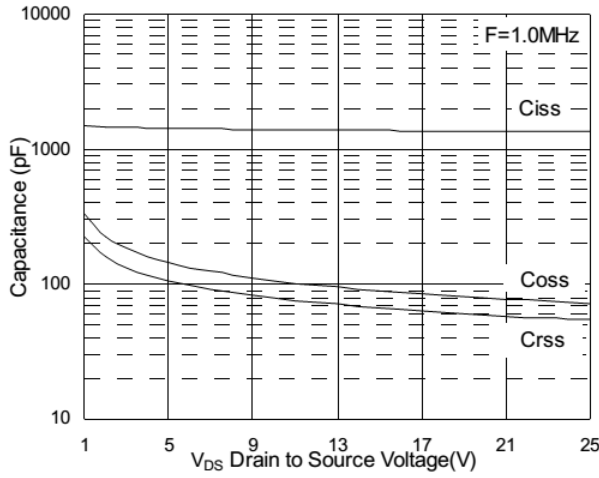
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● **TYPICAL CHARACTERISTICS (TA=25°C Unless otherwise noted)**



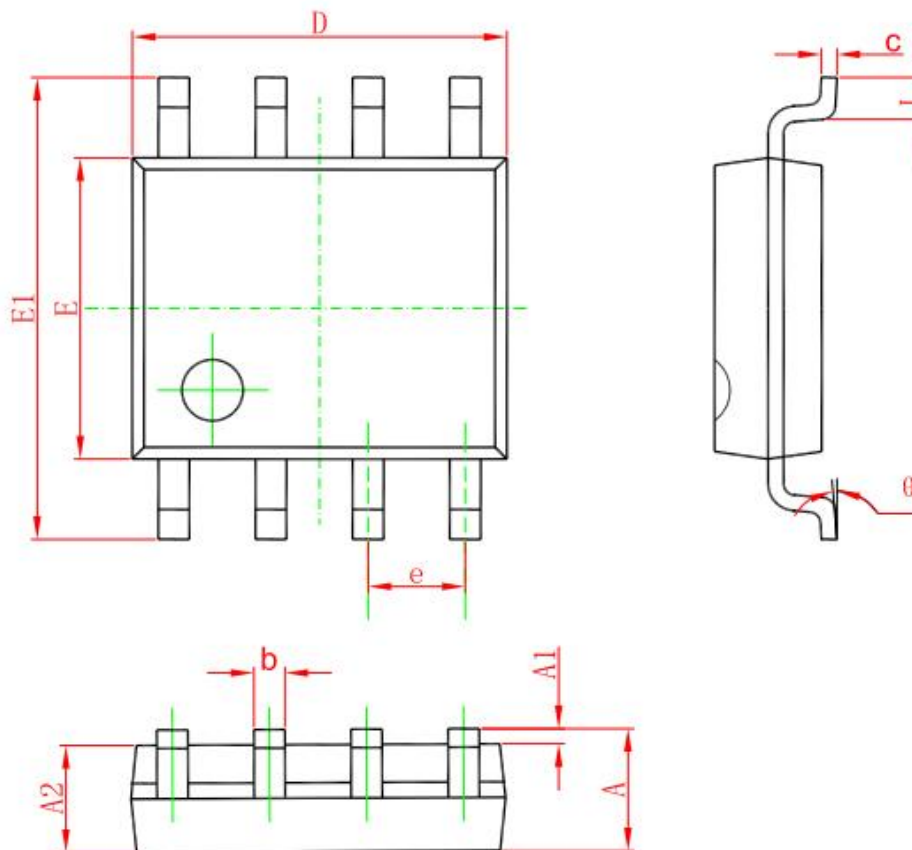
● TYPICAL CHARACTERISTICS (TA=25°C Unless otherwise noted)



● ORDERING INFORMATION

| Part Number | Package code | Shipping |
|-------------|--------------|------------------|
| VIC1562DQ | DQ: SOP8 | 2500/Tape & Reel |

● PACKAGE DIMENSIONS



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.350 | 1.750 | 0.053 | 0.069 |
| A1 | 0.100 | 0.250 | 0.004 | 0.010 |
| A2 | 1.350 | 1.550 | 0.053 | 0.061 |
| b | 0.330 | 0.510 | 0.013 | 0.020 |
| c | 0.170 | 0.250 | 0.006 | 0.010 |
| D | 4.700 | 5.100 | 0.185 | 0.200 |
| E | 3.800 | 4.000 | 0.150 | 0.157 |
| E1 | 5.800 | 6.200 | 0.228 | 0.244 |
| e | 1.270 (BSC) | | 0.050 (BSC) | |
| L | 0.400 | 1.270 | 0.016 | 0.050 |
| θ | 0° | 8° | 0° | 8° |

单击下面可查看定价，库存，交付和生命周期等信息

[>>VIC\(微科\)](#)