N-Channel Enhancement-Mode Vertical DMOS FET Quad Array

Ordering Information

BV_{DSS} / BV_{DGS}	$R_{DS(ON)}$ (max)	Order Number / Package
		14-Pin P-Dip
40V	3.0Ω	VN0104N6
60V	3.0Ω	VN0106N6

Features

- ☐ 4 independent channels
- ☐ 4 electrically isolated die
- ☐ Free from secondary breakdown
- ☐ Low power drive requirement
- ☐ Low C_{ISS} and fast switching speeds
- ☐ High input impedance and high gain

Applications

- ☐ Motor controls
- ☐ Convertors
- ☐ Power supply circuits
- ☐ Drivers (relays, hammers, solenoids, lamps, memories, displays, bipolar transistors, etc.)
- ☐ Amplifiers
- ☐ Switches

Thermal Characteristics

Package	
I_D continuous & I_{DR} (single die)	0.56A
I_D pulsed[+] & I_{DRM}[+]	2.0A
Power Dissipation @ T_C = 25°C[‡]	2W
θ_{ja} (°C/W)[‡]	110
θ_{jc} (°C/W)[‡]	62.5

[+] Pulse test 300 µS pulse, 2% duty cycle.
[‡] Total for package.

Advanced DMOS Technology

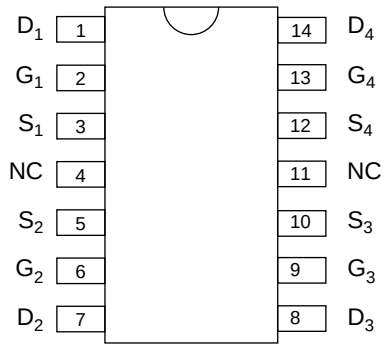
These enhancement-mode (normally-off) DMOS FET arrays utilize a vertical DMOS structure and Supertex's well-proven silicon-gate manufacturing process. This combination produces devices with the power handling capabilities of bipolar transistors and with the high input impedance and positive temperature coefficient inherent in MOS devices. Characteristic of all MOS structures, these devices are free from thermal runaway and thermally-induced secondary breakdown.

Supertex quad arrays use four independent DMOS transistors. They are ideally suited to a wide range of switching and amplifying applications where high breakdown voltage, high input impedance, low input capacitance, and fast switching speeds are desired.

Electrical Characteristics

Refer to VN0104/VN0106/VN0109 data sheet for detailed characteristics.

Pin Configuration



top view
14-pin DIP

Note: See Package Outline section for dimensions.