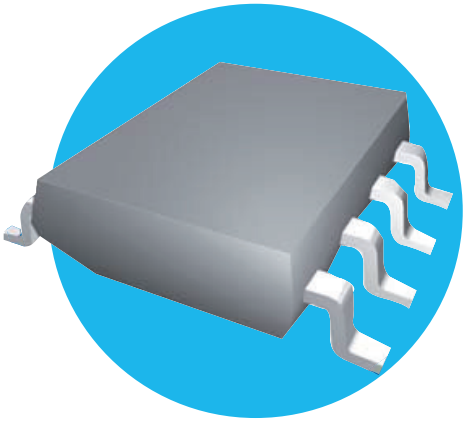
OBSOLETE

Surface Mount Bidirectional TVS Diode Array

QDN006LF Series

- Bidirectional protection for up to 4 lines data lines
- Low operating and clamping voltages
- Working voltages from 5 to 24V
- Low leakage current
- RoHS compliant



All Pb-free parts comply with EU Directive 2011/65/EU (RoHS2)

Applications

RS-232 and RS-432 Data Lines
Desktop and Portable Computers
Microprocessor Based Equipment
LAN/WAN Communication Equipment
Wireless Communication Equipment

IEC Compatibility

61000-4-2 (ESD): Air ±15kV, Contact ±8kV
61000-4-4 (EFT): 40A - 5/50ns
61000-4-5 (Lightning): 12A, 8/20µs

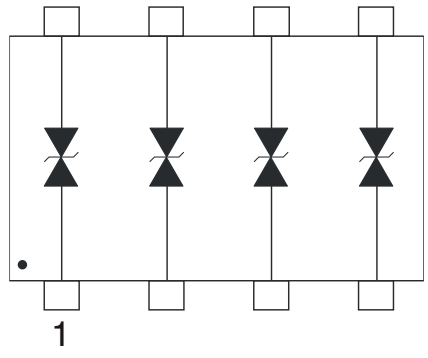
Characteristic Data

	Rated Reverse Standoff Voltage V_{RWM} (Volts)	Minimum Reverse Breakdown Voltage $V_{(BR)}$ I_t = 1mA (Volts)	Maximum Clamping Voltage V_C I_p = 1A (Volts)	Maximum Pulse Current I_{PP} t_p = 8/20µs (A)	Maximum Reverse Leakage Current I_R @V_{RWM} (µA)	Maximum Capacitance C V=0 f = 1MHz (pF)
QDN006LF-05	5.0	6.0	9.8	17.0	20	350
QDN006LF-12	12.0	13.3	19.0	12.0	1	120
QDN006LF-15	15.0	16.7	24.0	10.0	1	75
QDN006LF-24	24.0	26.7	43.0	5.0	1	50

Maximum Ratings

Peak Pulse Power (t_p = 8/20µs) P_{pp}	ESD Voltage IEC 61000-4-2 V_{ESD}	Operating Temperature T_j	Storage Temperature T_{STG}	Solder Temperature (10 seconds) T_{ll}
300W	>25kV	-55°C to +150°C	-55°C to +150°C	260°C

Schematic Data

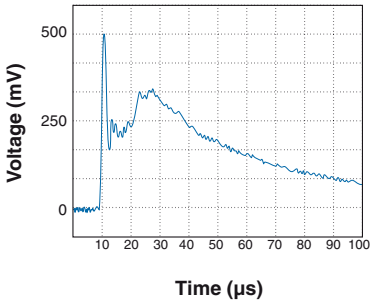


Discharge Data (IRC 61000-4-2)

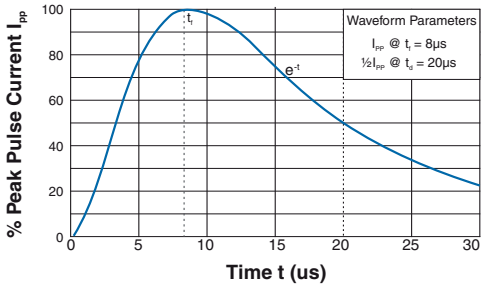
Level	Initial Peak Current (A)	Peak Current 30ns (A)	Peak Currnet 60ns (A)	Test Voltage Contact (kV)	Test Voltage Air (kV)
1	7.5	4.0	8.0	2.0	2.0
2	15.0	8.0	4.0	4.0	4.0
3	22.5	12.0	6.0	6.0	8.0
4	30.0	16.0	8.0	8.0	15.0

ESD Pulse Waveform Data

Overshoot and Clamping Voltage
25kv 1/30ns waveform ESD Pulse Test

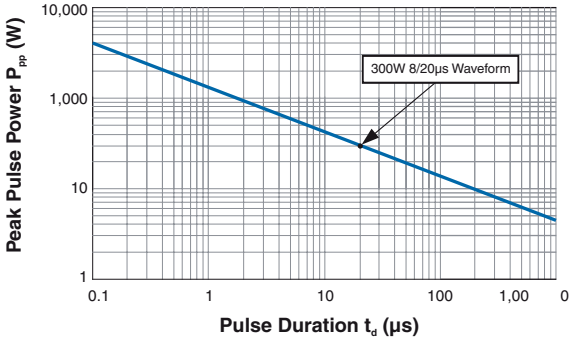


Pulse Waveform

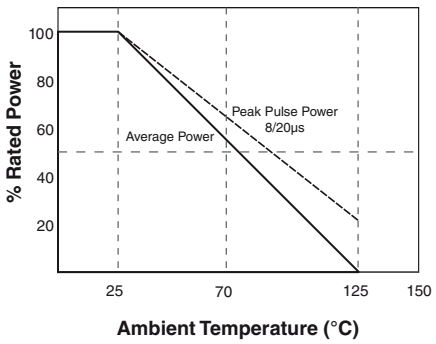


Power Rating Data

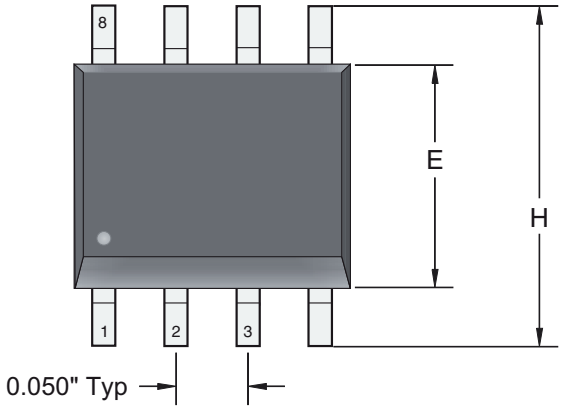
Peak Pulse Power vs Time



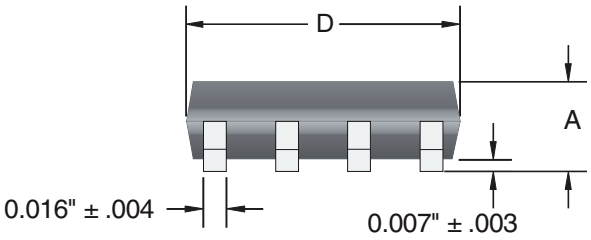
Power vs Temperature

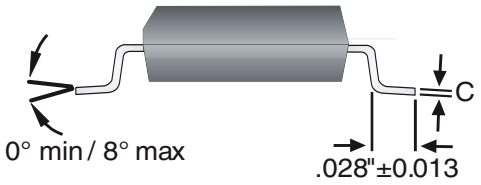


Physical Data



	QDN006LF
D	0.193"±0.004
H	0.236"±0.008
E	0.153"±0.004
A	0.061"±0.008
C	0.008"±0.002





Notes.

All dimesions exclude mold flash, end flash and metal burrs which shall not exceed 0.015" per side.

Maximum lead coplanarity is 0.004".

Ordering Data

Prefix ..... DNR - QDN006LF - 05 - T07

Model
QDN006LF = Bidirectional TVS Array in an 8-Pin SOIC-N Package

Characteristic Code
05 = 5.0V Reverse Standoff Voltage
12 = 12.0V Reverse Standoff Voltage
15 = 15.0V Reverse Standoff Voltage
24 = 24.0V Reverse Standoff Voltage

Packaging
BK = Tubes (95 count)
T07 = 7" Reel (500 count)