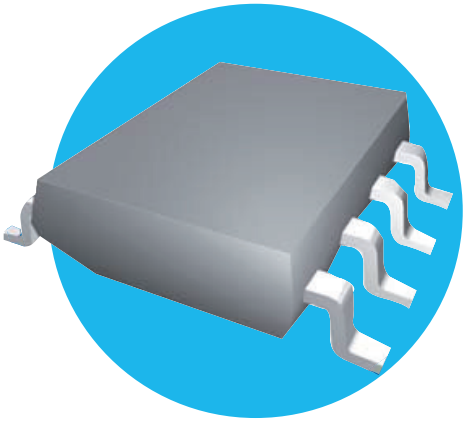
TT Electronics
Make Possible

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

General Note

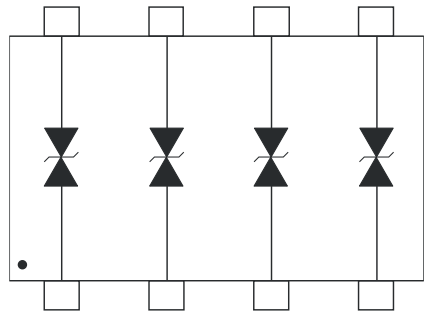
TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Bi technologies IRC Welwyn

www.ttelectronicsresistors.com

© TT Electronics plc

Schematic Data

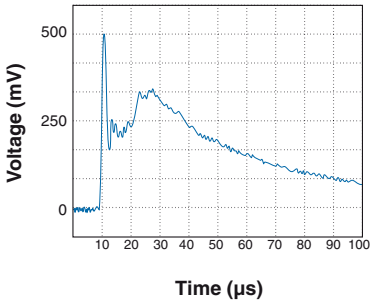


Discharge Data (IRC 61000-4-2)

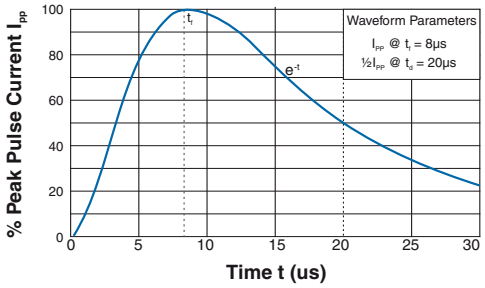
Level	Initial Peak Current (A)	Peak Current 30ns (A)	Peak Currnet 60ns (A)	Test Voltage Contact (kV)	Test Voltage Air (kV)
1	7.5	4.0	8.0	2.0	2.0
2	15.0	8.0	4.0	4.0	4.0
3	22.5	12.0	6.0	6.0	8.0
4	30.0	16.0	8.0	8.0	15.0

ESD Pulse Waveform Data

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

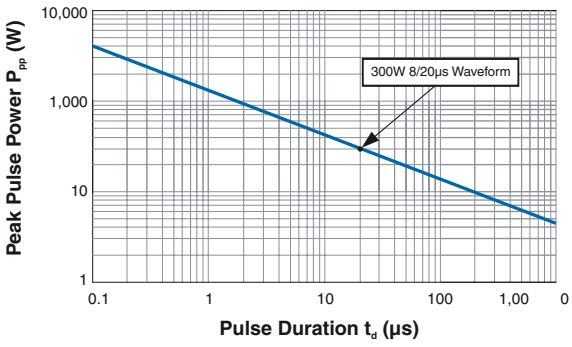


Pulse Waveform

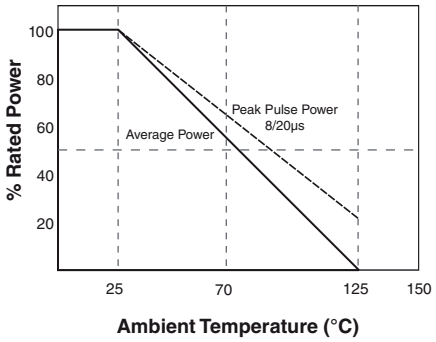


Power Rating Data

Peak Pulse Power vs Time



Power vs Temperature



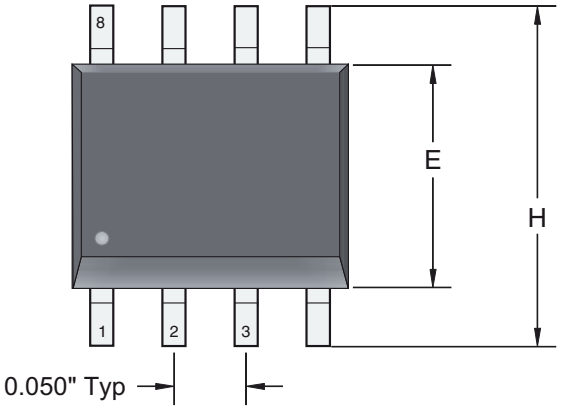
General Note
TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Bi technologies IRC Welwyn

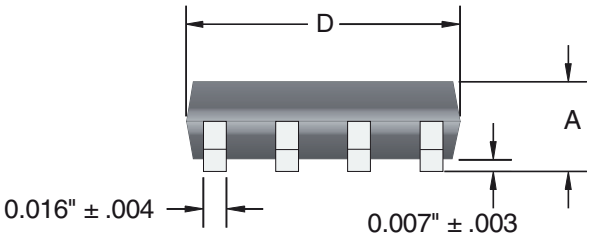
www.ttelectronicsresistors.com

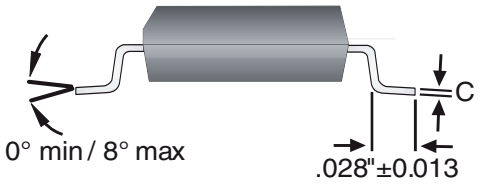
© TT Electronics plc

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)

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

Bi technologies IRC Welwyn

www.ttelectronicsresistors.com

© TT Electronics plc