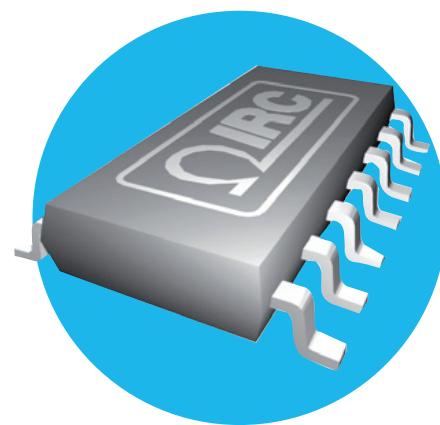


# Low Capacitance TVS Diode Array

## QDN004LF Series

- Protects up to 8 lines with ESD protection > 40 kV
- 500 Watts peak pulse power per Line (tp=8/20μs)
- Available in multiple voltage types: 3.3V to 36V
- Unidirectional & bidirectional configurations
- Low capacitance: 15pF
- RoHS compliant



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

## Applications

Wireless Communication Circuits

RS-422, RS-432, RS-485

Low Voltage ASICs

Ethernet 10/100 Base-T

## IEC Compatibility

61000-4-2 (ESD): Air - 15kV, Contact - 8kV

61000-4-4 (EFT): 40A - 5/50ns

61000-4-5 (Surge): 12A, 8/20μs Level 1 (Line-Ground) and Level 2 (Line-Line)

## Characteristic Data

	Rated Standoff Voltage $V_{WM}$ (Volts)	Minimum Breakdown Voltage $V_{(BR)}$ (Volts)	Maximum Clamping Voltage $I_p = 1A$ (Volts)	Maximum Pulse Clamping Voltage $t_f - t_d$	Maximum Leakage Current @ $V_{WM}$ $I_D$ (μA)	Maximum Capacitance C $V=0$ $f = 1MHz$ (pF)	Voltage Temperature Coefficient $qV_{(BR)}$ (mV/°C)
QDN004LF-U03 QDN004LF-B03	3.3	4.5	7.0	20.0V @ 35.0A	125	15	-3
QDN004LF-U05 QDN004LF-B05	5.0	6.0	9.8	24.0V @ 42.0A	20	15	3
QDN004LF-U08 QDN004LF-B08	8.0	8.5	13.4	26.0V @ 30.0A	10	15	9
QDN004LF-U12 QDN004LF-B12	12.0	13.3	19.0	33.0V @ 21.0A	2	15	16
QDN004LF-U15 QDN004LF-B15	15.0	16.7	25.5	39.0V @ 15.0A	2	15	17
QDN004LF-U24 QDN004LF-B24	24.0	26.7	40.0	57.0V @ 10.0A	2	15	26
QDN004LF-U36 QDN004LF-B36	36.0	40.0	53.0	72.0V @ 7.0A	2	15	36

### General Note

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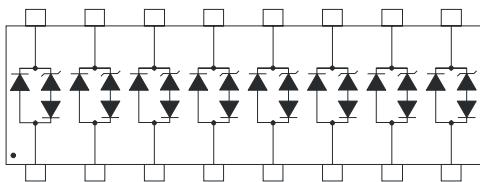
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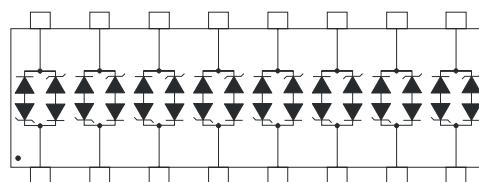
## Maximum Ratings

Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	Operating Temperature	Storage Temperature	Forward Voltage 50mA 300 $\mu\text{s}$ - Square Wave	Solder Temperature (10 seconds)
$P_{pp}$	$T_J$	$T_{STG}$	$V_F$	$T_{II}$
500W	-55°C to +150°C	-55°C to +150°C	1.5	260°C

## Schematic Data

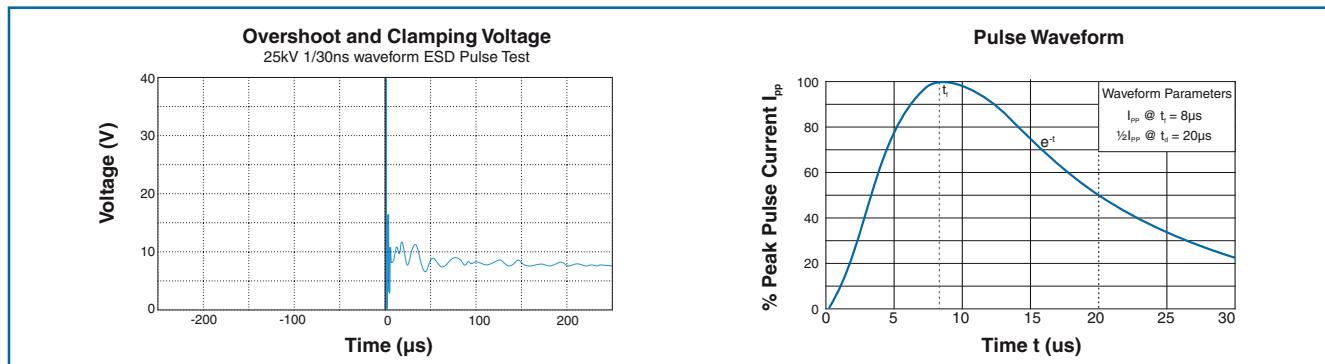


Unidirectional Schematic

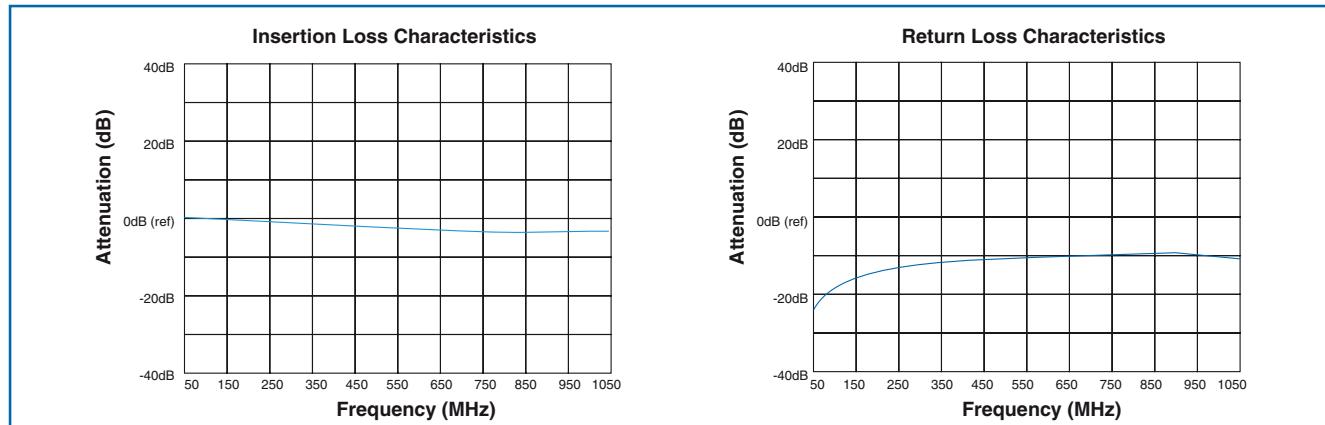


Bidirectional Schematic

## ESD Pulse Data



## Loss Characteristic Data



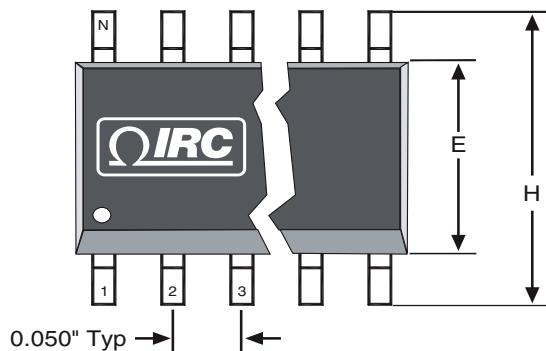
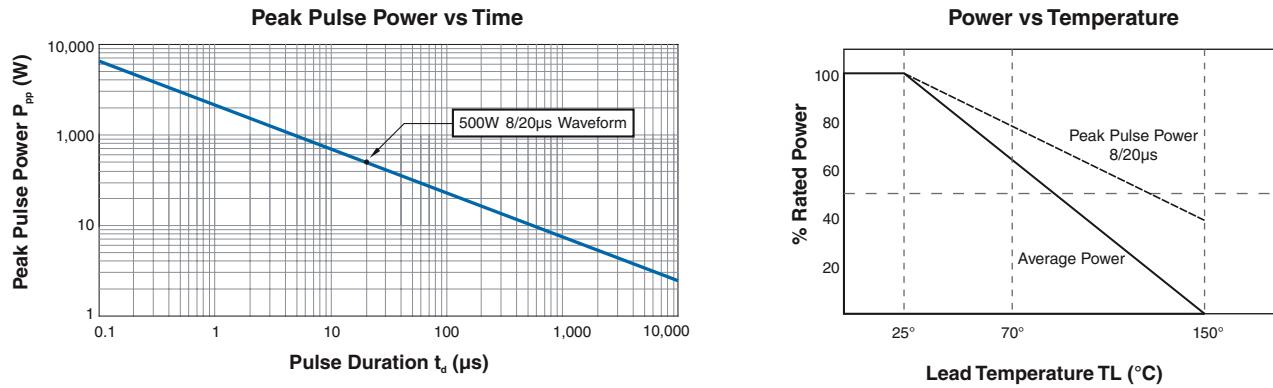
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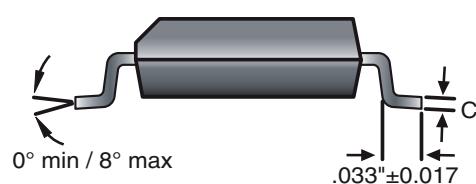
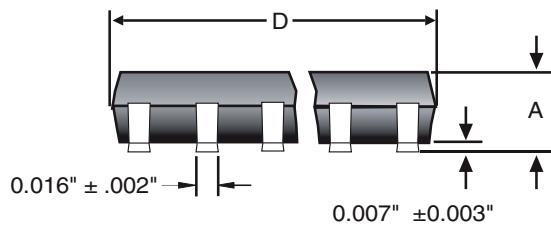
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## Power Rating Data



	QDN004LF
D	0.390"±0.004
H	0.236"±0.008
E	0.153"±0.004
A	0.061"±0.007
C	0.008"±0.001



## Notes.

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

Maximum lead coplanarity is 0.004".

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## Ordering Data

**Prefix** ..... **DNR** - **QDN004** - **B** **05** - **T13**

**Model** ..... QDN004LF = 16-PIN TVS Array in a 16-Pin SOIC-N Package

**Schematic** .....  
U = Unidirectional  
B = Bidirectional

**Characteristic Code** .....  
03 = 3.3V Standoff Voltage  
05 = 5.0V Standoff Voltage  
08 = 8.0 V Standoff Voltage  
12 = 12.0V Standoff Voltage  
15 = 15.0V Standoff Voltage  
24 = 24.0V Standoff Voltage  
36 = 36.0V Standoff Voltage

**Packaging** .....  
BK = Tubes (48 count)  
T07 = 7" Reel (1000 count)  
T13 = 13" Reel (2500 count)

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