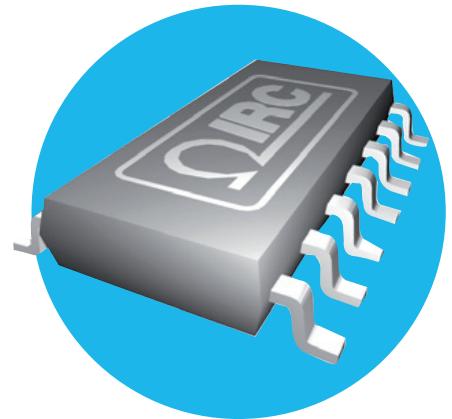


# Low Capacitance TVS Diode Array

## QDN004LF Series

- Protects up to 8 lines with ESD protection > 40 kV
- 500 Watts peak pulse power per Line ( $t_p=8/20\mu s$ )
- 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, 8/20 $\mu s$  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 $t_t - t_d$	Maximum Leakage Current @ $V_{WM}$ $I_D$ ( $\mu A$ )	Maximum Capacitance C $V=0$ $f = 1MHz$ (pF)	Voltage Temperature Coefficient $qV_{(BR)}$ (mV/ $^{\circ}C$ )
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

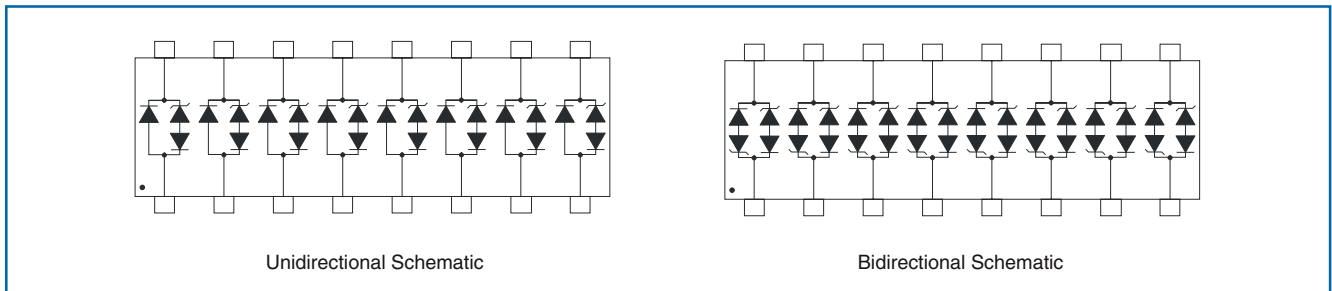
### General Note

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.

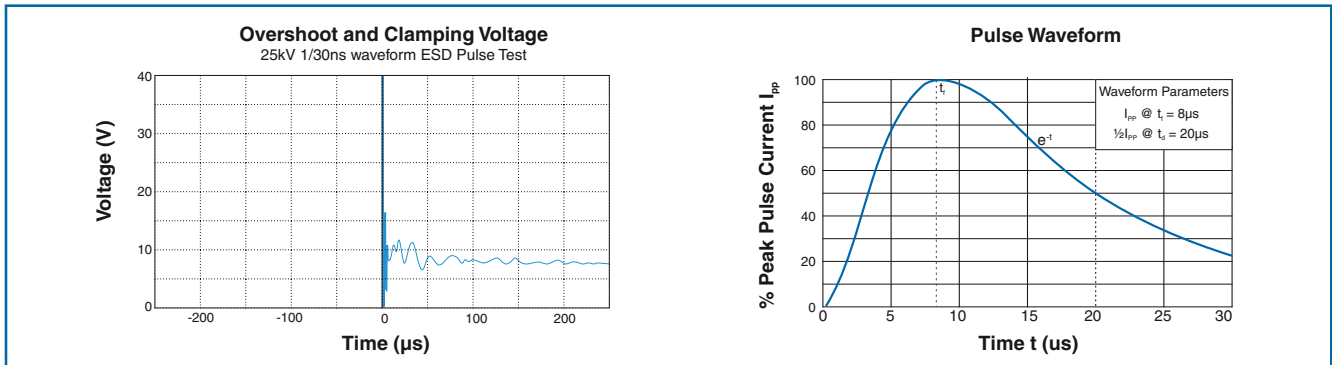
## Maximum Ratings

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

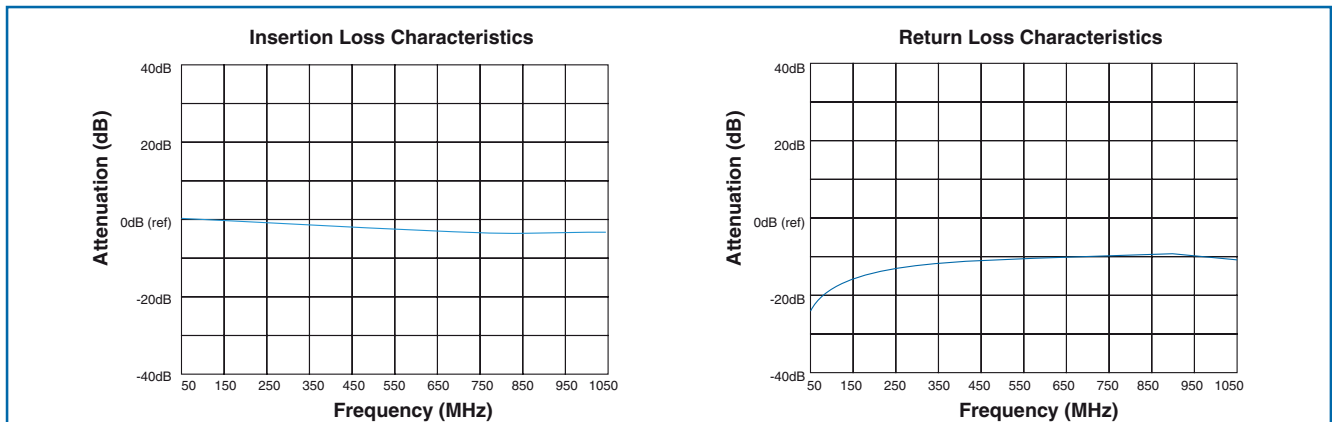
## Schematic Data



## ESD Pulse Data



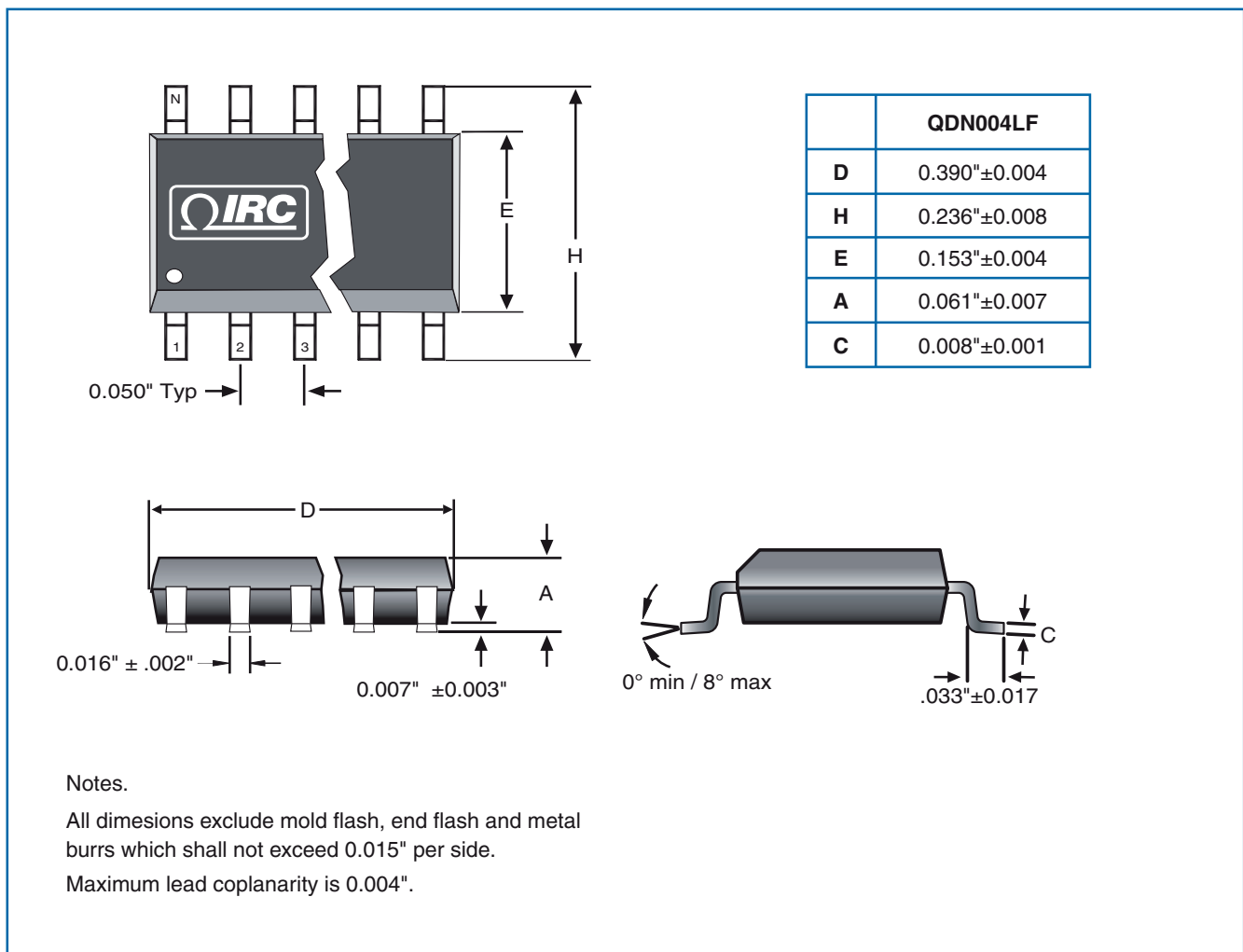
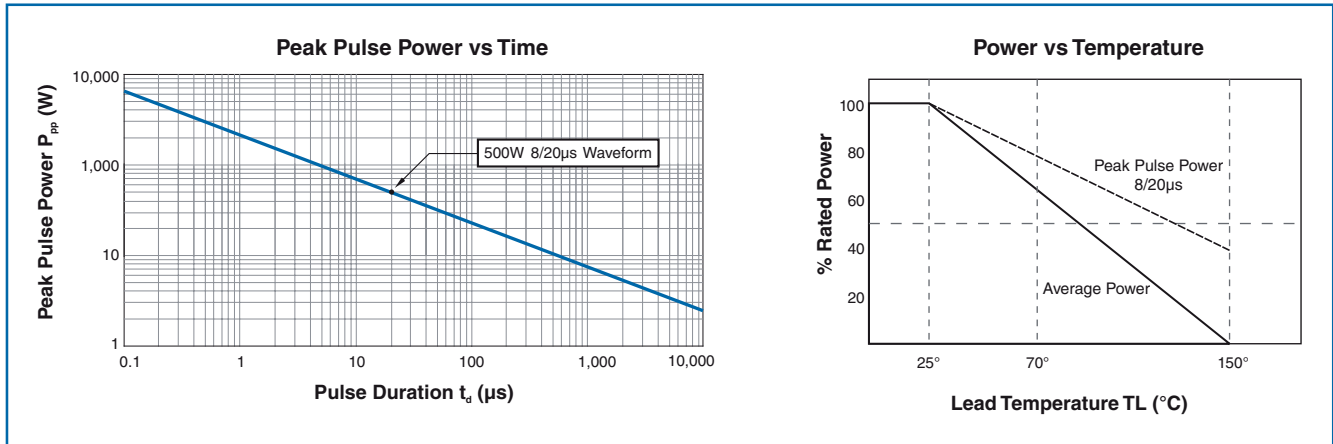
## Loss Characteristic Data



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## Power Rating Data



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QDN004LF Series

## 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 = 8.0V 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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