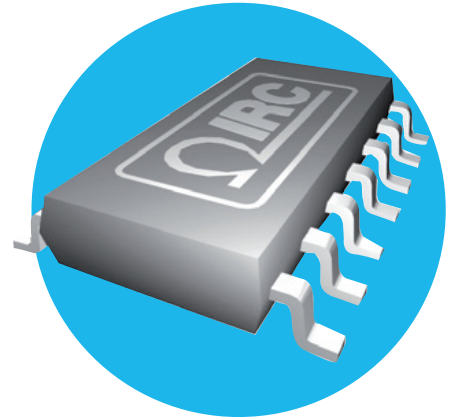



Surface Mount TVS Diode Array

QDN005LF Series

- Protects up to 8 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 $\pm 15\text{kV}$, Contact $\pm 8\text{kV}$
61000-4-4 (EFT): 40A - 5/50ns
61000-4-5 (Lightning): 12A, 8/20 μs

Characteristic Data

	Rated Reverse Standoff Voltage V_{RWM} (Volts)	Minimum Reverse Breakdown Voltage $V_{(BR)}$ $I_t = 1\text{mA}$ (Volts)	Maximum Clamping Voltage V_C $I_p = 1\text{A}$ (Volts)	Maximum Pulse Current I_{PP} $t_p = 8/20\mu\text{s}$ (A)	Maximum Reverse Leakage Current I_R @ V_{RWM} (μA)	Maximum Capacitance C V=0 $f = 1\text{MHz}$ (pF)
QDN005LF-05	5.0	6.0	9.8	17.0	20	350
QDN005LF-12	12.0	13.3	19.0	12.0	1	120
QDN005LF-15	15.0	16.7	24.0	10.0	1	75
QDN005LF-24	24.0	26.7	43.0	5.0	1	50

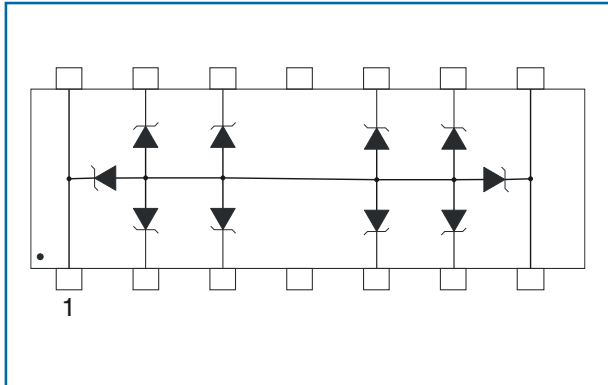
Maximum Ratings

Peak Pulse Power ($t_p = 8/20\mu\text{s}$) P_{PP}	Operating Temperature T_j	Storage Temperature T_{STG}	Solder Temperature (10 seconds) T_{II}
300W	-55°C to +150°C	-55°C to +150°C	260°C

General Note

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All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

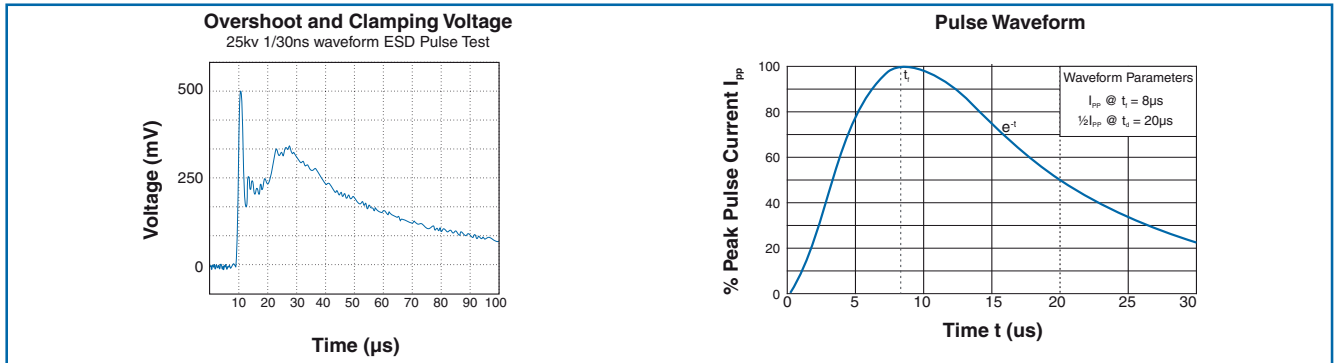
Schematic Data



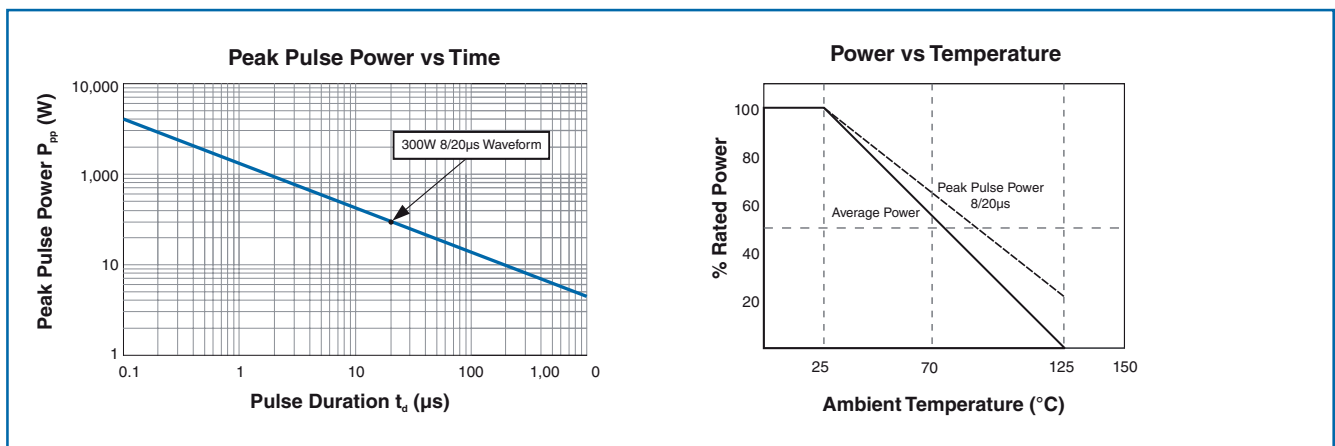
Discharge Data (IRC 61000-4-2)

Level	Initial Peak Current (A)	Peak Current 30ns (A)	Peak Current 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



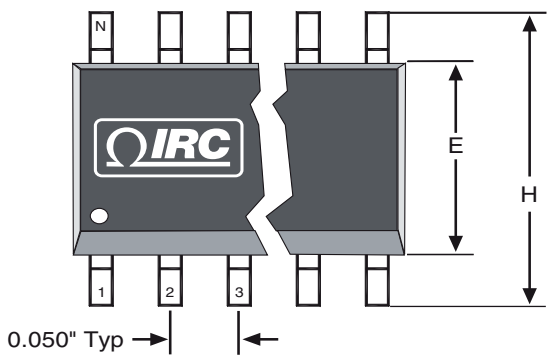
Power Rating Data



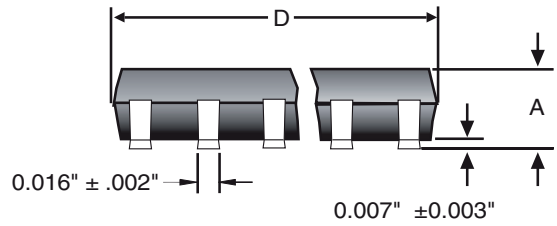
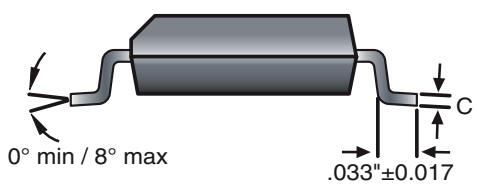
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Physical Data



	QDN005
D	0.341"±0.004
H	0.236"±0.008
E	0.153"±0.004
A	0.061"±0.008
C	0.008"±0.002

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".

Ordering Data

Prefix **DNR** - **QDN005LF** - **05** - **T07**

Model
QDN005LF = TVS Array in a 14-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 (56 count)
T07 = 7" Reel (500 count)

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