



ULC0406FC3.3C
thru
ULC0406FC24C

BIDIRECTIONAL UNBUMPED LOW CAPACITANCE FLIP CHIP

APPLICATIONS

- ✓ Cellular Phones
- ✓ Handheld Electronics
- ✓ Personal Digital Assistants (PDAs)
- ✓ Notebook Computers
- ✓ SMART Cards

IEC COMPATIBILITY (EN61000-4)

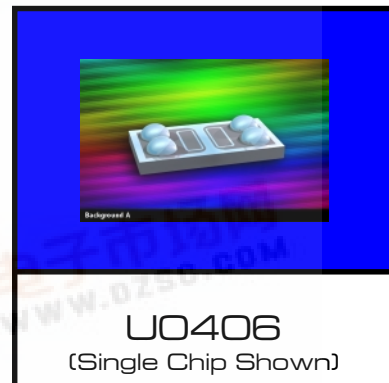
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

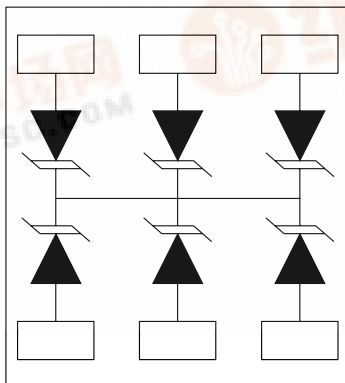
- ✓ ESD Protection > 25 kilovolts
- ✓ Available in Six Voltage Types Ranging From 3.3V to 24V
- ✓ 200 Watts Peak Pulse Power per Line (8/20μs)
- ✓ Low Clamping Voltage
- ✓ Monolithic Structure
- ✓ **LOW CAPACITANCE**
- ✓ **LOW STANDBY CURRENT**

MECHANICAL CHARACTERISTICS

- ✓ Standard EIA Chip Size: 0406
- ✓ Weight 0.73 milligrams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Plastic & Paper Tape and Reel Per EIA Standard 481
- ✓ Device Marking On Reel



CIRCUIT DIAGRAM



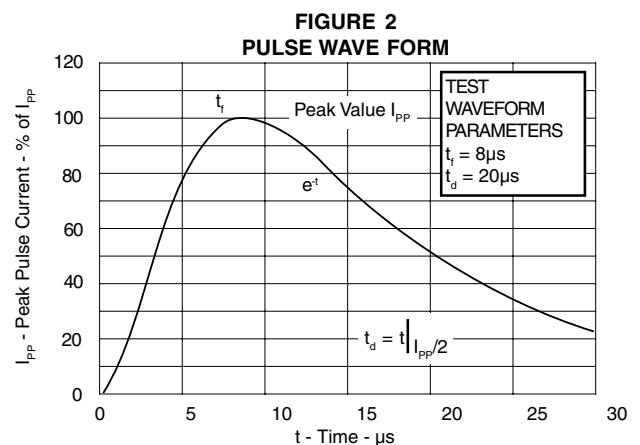
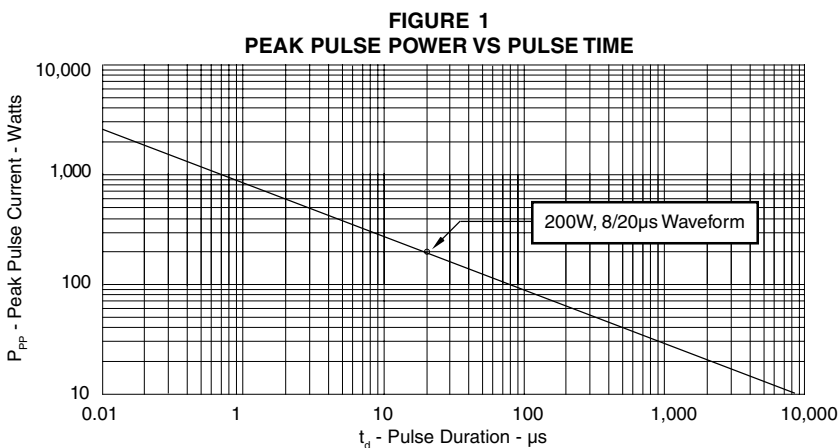
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DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	200	Watts
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C

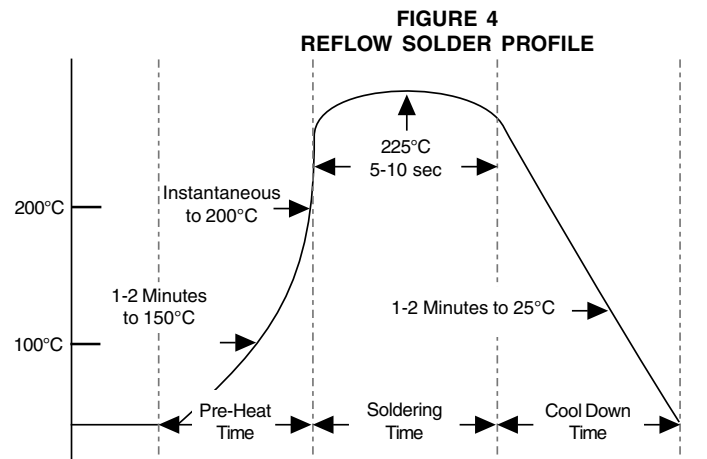
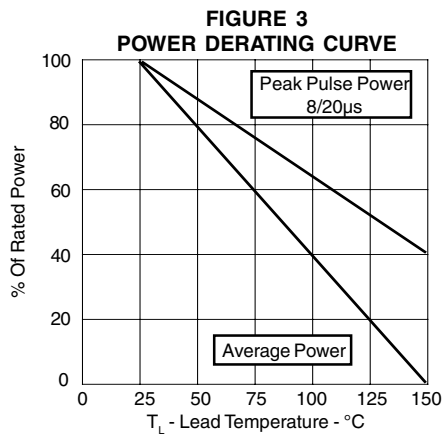
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified						
PART NUMBER (See Note 1)	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_P = 1A$ V_C VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20 μs V_C @ I_{PP}	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D μA	TYPICAL CAPACITANCE 0V @ 1 MHz C pF
ULC0406FC3.3C	3.3	4.0	7.0	12.5V @ 16A	75	70
ULC0406FC05C	5.9	6.0	11.0	13V @ 15A	10	35
ULC0406FC08C	8.0	8.0	13.2	18V @ 11A	1	32
ULC0406FC12C	12.0	13.3	19.8	26.9V @ 7.4A	1	30
ULC0406FC15C	15.0	16.7	25.4	34.5V @ 5.8A	1	25
ULC0406FC24C	24.0	26.7	37.2	50.6V @ 4A	1	20

Note 1: All devices are bidirectional. Electrical characteristics apply in both directions. Electrical characteristics for 3V, 8V, 12V, 15V and 24V devices are preliminary.

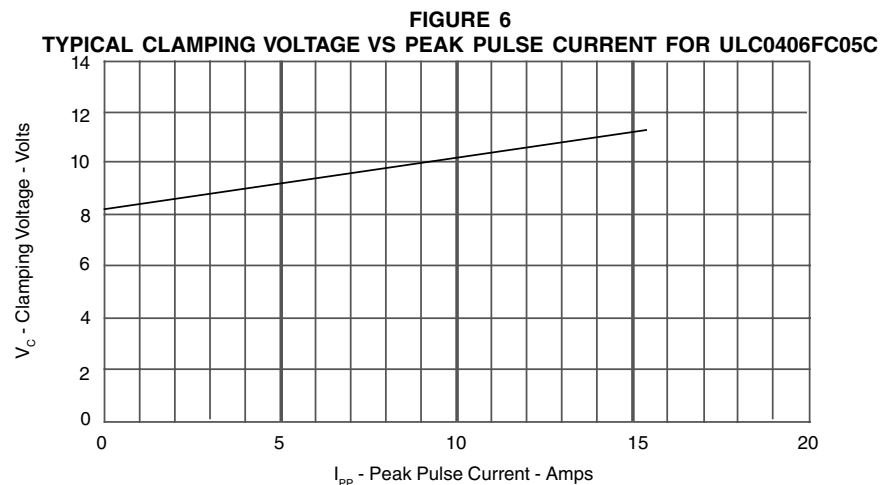
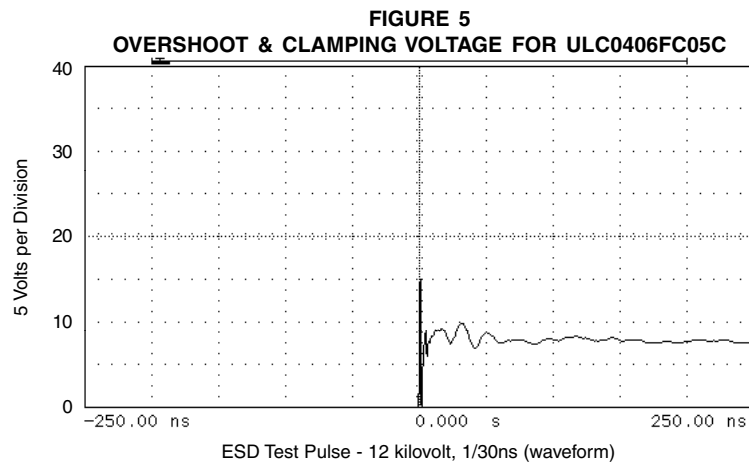


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GRAPHS

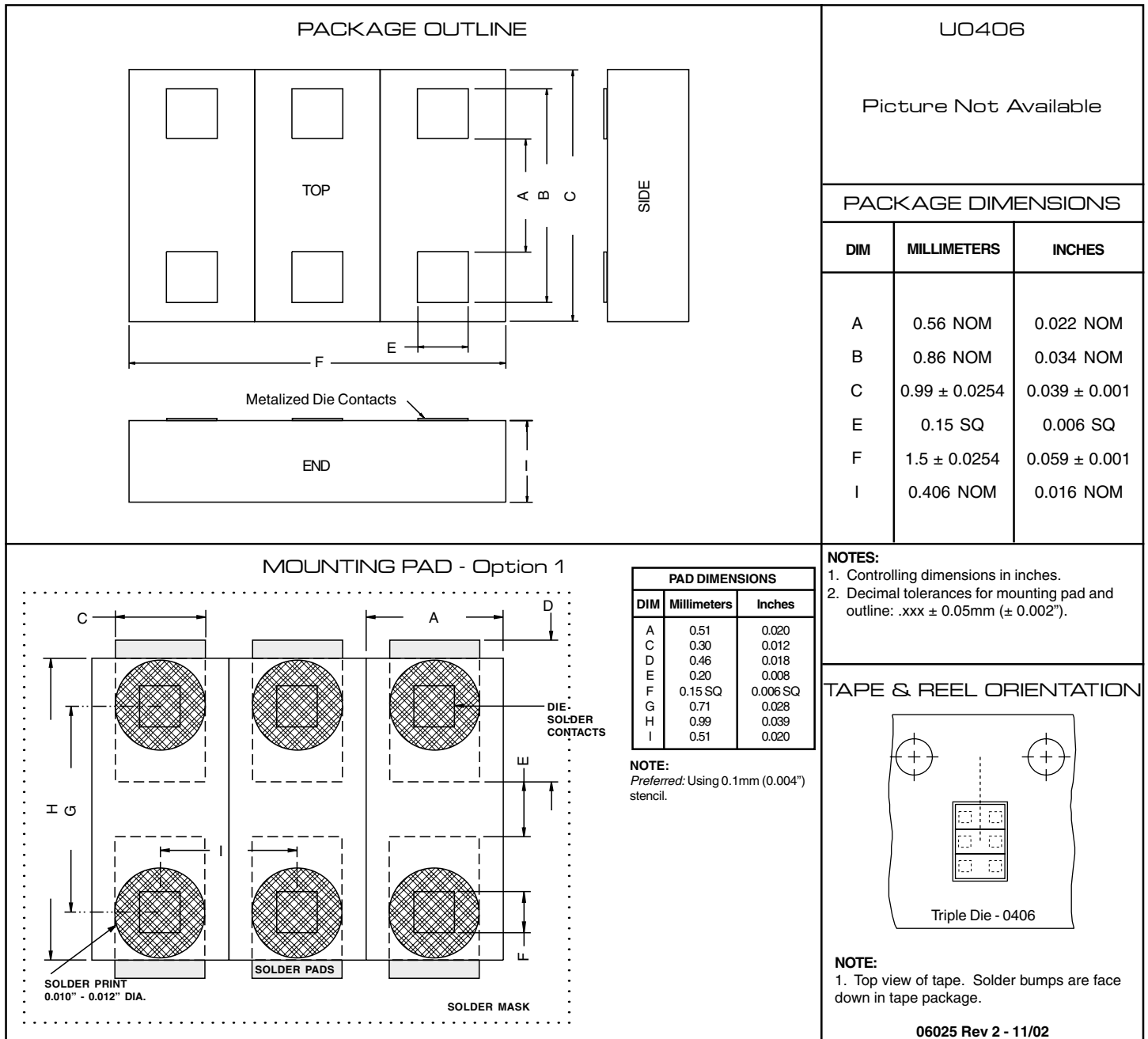


Note: This reflow profile does not take into account the printed circuit board (PCB) material heating time. Additional time may be required for the preheat time and cool down time upon the PCB or board material.



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PACKAGE OUTLINE & DIMENSIONS



06025 Rev 2 - 11/02

TAPE & REEL ORDERING INFORMATION:

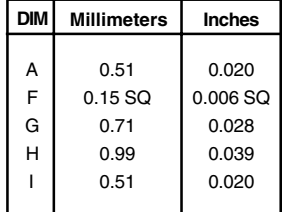
Surface mount product is taped and reeled in accordance with EIA-481.

Plastic Tape: 7 Inch Reels - 5,000 pieces per reel. Ordering Suffix: -T75-1 (i.e., ULC0406FC05C-T75-1).

Paper Tape: 7 Inch Reels - 5,000 pieces per reel. Ordering Suffix: -T75-2 (i.e., ULC0406FC05C-T75-2).

PACKAGE OUTLINE & DIMENSIONS

PAD DIMENSIONS



1. Controlling dimensions in inches.
2. Decimal tolerances for mounting pad and outline:
.xxx $\pm$ 0.05mm ($\pm$ 0.002").
3. Preferred: Using 0.1mm (0.004") stencil.

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