

BIDIRECTIONAL UNBUMPED FLIP CHIP
APPLICATIONS

- ✓ Cellular Phones
- ✓ MCM Boards
- ✓ Wireless Communication Circuits
- ✓ IR LEDs
- ✓ SMART Cards & PCMCIA Cards

IEC COMPATIBILITY (EN61000-4)

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

FEATURES

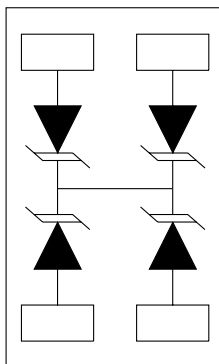
- ✓ ESD Protection > 25 kilovolts
- ✓ Available in Multiple Voltage Types Ranging From 3.3V to 36V
- ✓ 250 Watts Peak Pulse Power Dissipation per Line (8/20μs)
- ✓ Monolithic Structure

MECHANICAL CHARACTERISTICS

- ✓ Standard EIA Chip Size: 0404
- ✓ Weight 0.73 milligrams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Plastic & Paper Tape and Reel Per EIA Standard 481-1-A
- ✓ Device Marking On Reel

No
Picture Available

U0404

CIRCUIT DIAGRAM


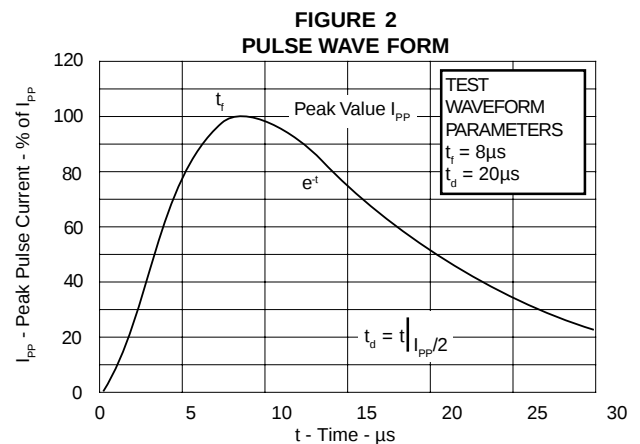
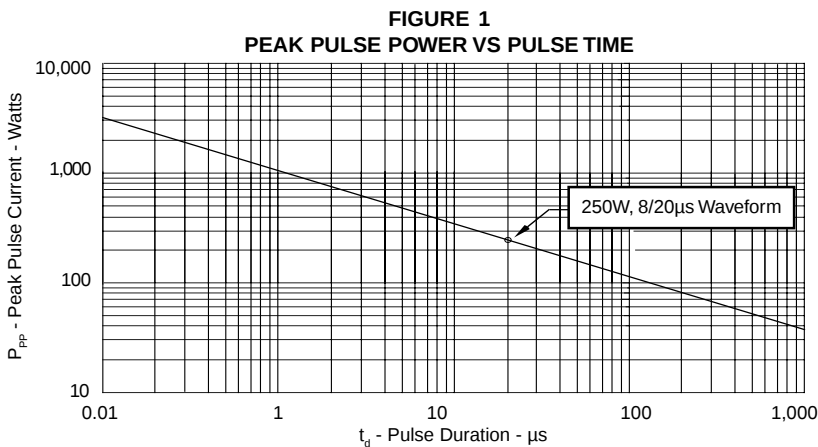
U0404FC3.3C thru U0404FC36C

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}	250	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
U0404FC3.3C	3.3	4.0	7.0	12.5V @ 20A	75	150
U0404FC05C	5.0	6.0	9.8	14.7V @ 17A	10	100
U0404FC08C	8.0	8.5	13.4	19.2V @ 13A	10	75
U0404FC12C	12.0	13.3	19.0	29.7V @ 9.0A	1	50
U0404FC15C	15.0	16.7	24.0	35.7V @ 7.0A	1	40
U0404FC24C	24.0	26.7	43.0	55.0V @ 5.0A	1	30
U0404FC36C	36.0	40.0	64.0	84.0V @ 3.0A	1	25

Note 1: All devices are bidirectional. Electrical characteristics apply in both directions.



U0404FC3.3C
thru
U0404FC36C

GRAPHS

FIGURE 3
POWER DERATING CURVE

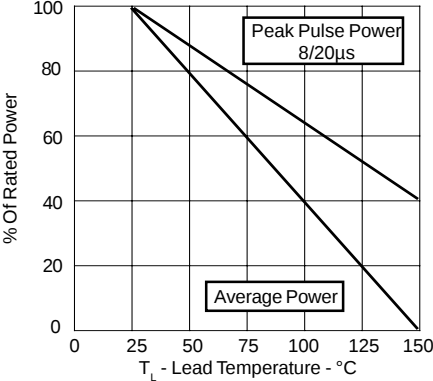
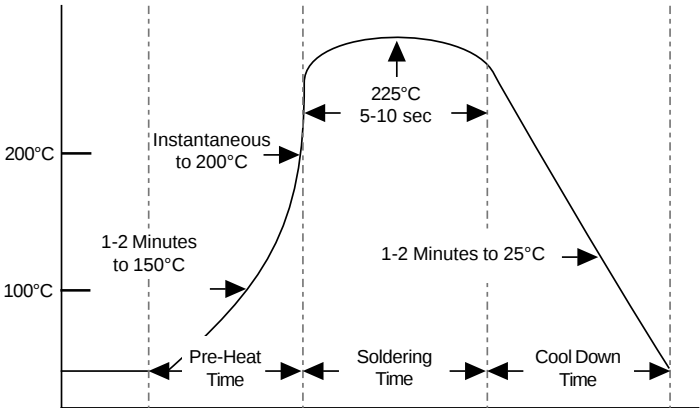


FIGURE 4
REFLOW SOLDER PROFILE



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.

FIGURE 5
OVERSHOOT & CLAMPING VOLTAGE FOR U0404FC05C

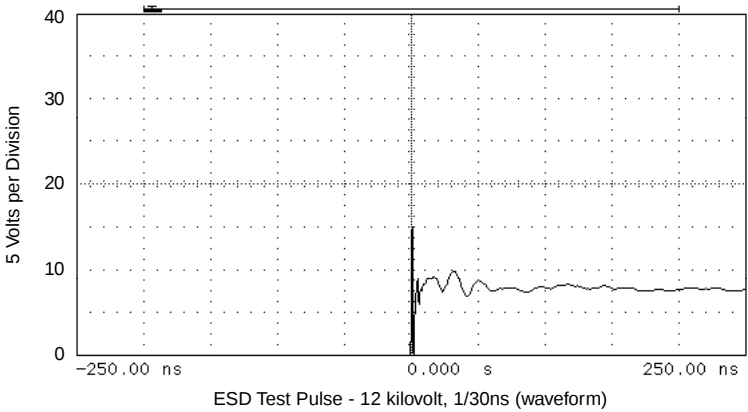
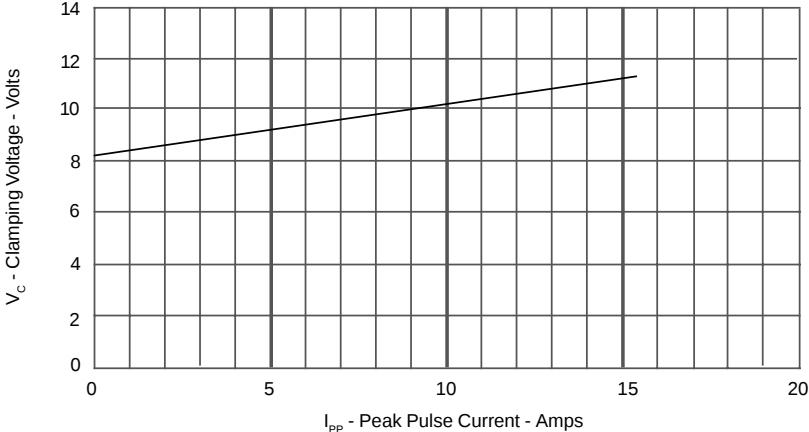
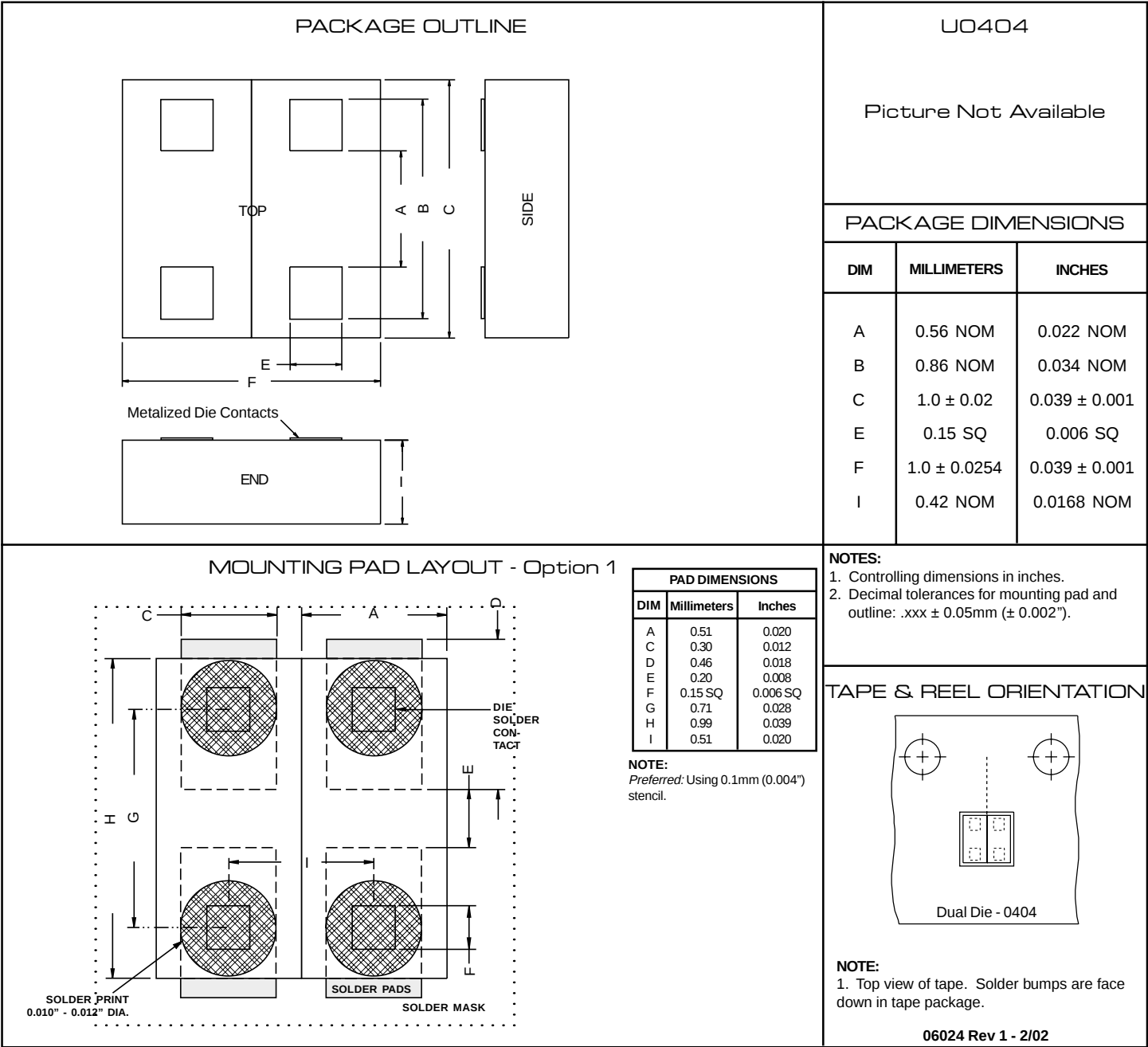


FIGURE 6
TYPICAL CLAMPING VOLTAGE VS PEAK PULSE CURRENT FOR U0404FC05C



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thru
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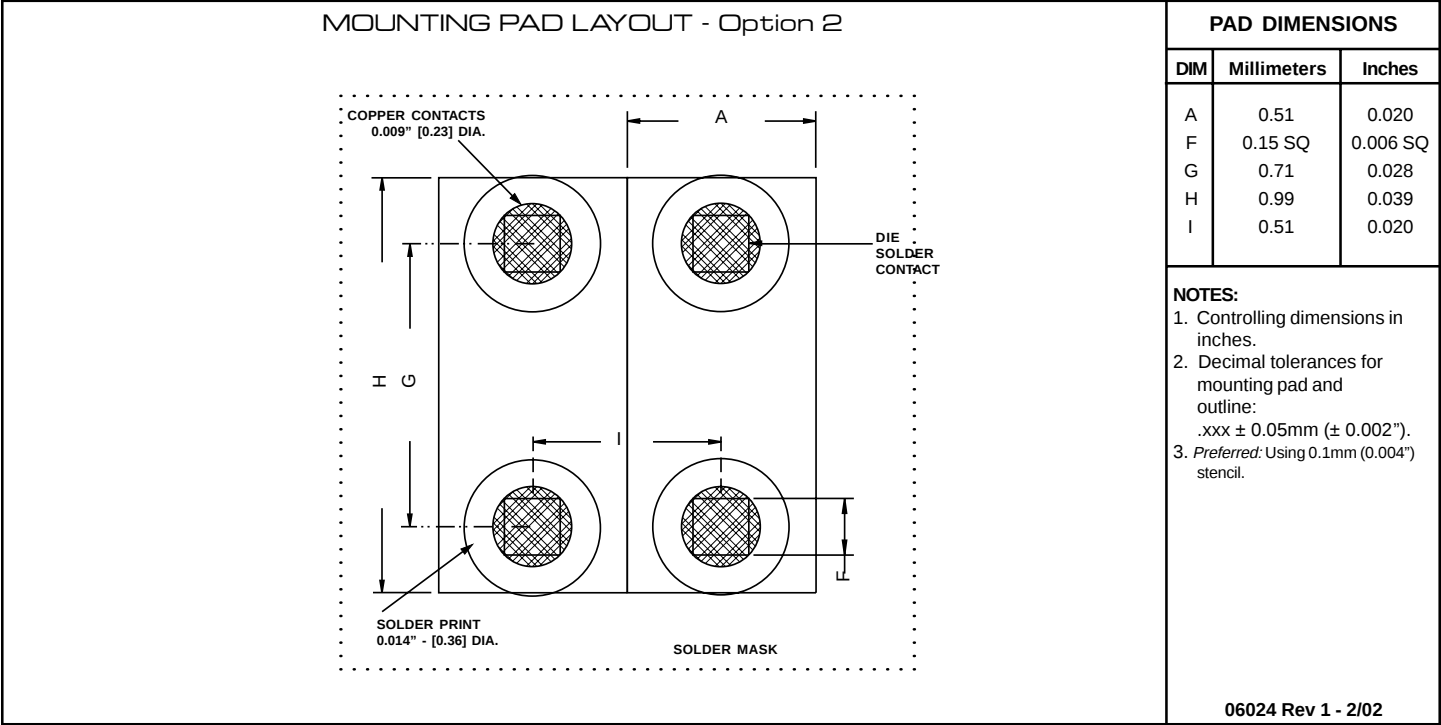
PACKAGE OUTLINE & DIMENSIONS



TAPE & REEL PACKAGING:
Surface mount product is taped and reeled in accordance with EIA-481, reel quantities and sizes are as follows:
Paper Tape: 7 Inch Reel - 3,000 or 10,000 pieces per reel. Plastic Tape: 7 Inch Reel - 3,000 or 5,000 per reel.

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ProTek Devices
2929 South Fair Lane, Tempe, AZ 85282
Tel: 602-431-8101 Fax: 602-431-2288
E-Mail: sales@protekdevices.com
Web Site: www.protekdevices.com