



TASER® ELECTRONIC CONTROL DEVICES ELECTRICAL CHARACTERISTICS



WARNING
Electronic Control Device
 • Can temporarily incapacitate target.
 • Can cause injury.
 • Obey warnings, instructions and all laws.
 • Comply with current training materials and requirements.
 • See www.TASER.com.

ELECTRICAL OUTPUT CHARACTERISTIC	TASER® X26	ADVANCED TASER® M26
TASER ECD (Electronic Control Device) Waveforms, Pulse Plots, Pulse Rates		
Waveform	Complex (a single cycle 100 kHz [kilohertz] arcing phase followed by monophasic 100 µs [microsecond] stimulation phase). 48 µs decay time constant	50 kHz damped oscillation with a 17 µs decay time constant
Pulse Plots		
Pulse Rate	19 PPS (pulses per second [s]) crystal controlled	20 ± 25% PPS with NiMH® rechargeable cells 15 ± 25% PPS with Alkaline cells
Pulse Duration	100 µs	40 µs full waveform 10 µs main phase
Total per second discharge time ("on" time)	0.0019 seconds	0.0008 seconds (at 20 PPS)
Delivered Energy – Electrical pulse characteristics delivered to body.		
Delivered charge - main phase	100 µC (microcoulombs), 88 µC net	85 µC, 32 µC net
Energy per pulse delivered into 400 Ω (ohm) load	0.07 J (joules)	0.50 J
Current - average over one second - average current is the flow of coulombs - 1 mA (milliamperes) = 0.001 A	2.1 mA or 0.0021 A (average rectified current) 1.9 mA or 0.0019 A (current from main phase which is a better estimate of stimulation capacity)	3.6 mA or 0.0036 A (average rectified current) 1.7 mA or 0.0017 A (current from main phase which is a better estimate of stimulation capacity)



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Estimated current density	Estimated maximum current density in the heart is less than 2.7 mA/cm ² for the following conditions: TASER ECD mode: drive-stun, probe placement: frontal chest, subject dimensions: at least 40 cm chest diameter, BMI > 26	
Power output - delivered into 400 Ω load	1.33 W (watts)	7.39 W at 15 PPS
Voltage - peak (into 400 Ω load)	1,200 V (volts)	5,000 V
Voltage - avg. over duration of main phase	400 V	3,400 V
Voltage - avg. over duration of full pulse	442 V	320 V
Voltage - average over one second	0.84 V	1.44 V
Stored Energy – Internal electrical characteristics inside the ECD refer to the electrical current inside the ECD device. Stored energy is not “delivered” into the subject.		
Waveform and stimulation capability with typical 400 Ω load	1 A (average current during 100 μs pulse)	8.5 A (average current during 10 μs main phase) 0.8 A (average current during 40 μs full pulse)
Voltage - peak (open circuit arcing - 2" arc)	50,000 V	50,000 V
Energy per pulse - at main capacitor	0.36 J	1.76 J
Power output - delivered to main capacitor	6.84 W	26 W at 15 PPS
TASER ECD Power Source		
Power source	Digital Power Magazine (DPM) or eXtended DPM (XDPM) Two 3 V photo cells (Duracell® Ultra, CR123A)	8 - AA NiMH® cells (1.2 V per cell) or 8 - AA Alkaline cells (1.5 V per cell)
Expected number of TASER device discharges from fresh battery of cells	Approximately 195 five-second discharges, depending on temperature, battery charge and load characteristics.	200–300 typical, depending on temperature, battery charge and load characteristics.
Expected number of TASER pulses per battery of cells	20,000 pulses (estimate) (19 pps x 5 s = 95 pp/5s; 95 pp/5s x 195 discharges = 18,525 pulses per battery of cells [this can be estimated to 20,000 pulses])	6,000 pulses (M26 with battery of eight NiMH® AA) 1700 mAh (milliampere hour) penlight cells have been tested to continuously discharge for up to 6.5 minutes – which calculates to approximately 6,000 pulses per fresh battery of 1700 mAh cells

All values are nominal. Actual measurements on particular products may vary as a result of many factors including factors outside TASER International's control. Please refer to TASER published product specifications for specified limits, test conditions, and allowed tolerances. Read the manual and product literature. For more information please see current TASER device/product specification sheets, training materials, product manuals, and Web site (www.taser.com). TASER International reserves the right to change or modify this document without notice. TASER is a registered trademark of TASER International, Inc.