

# MX086-4

## Features

- Standard spacecraft screening is per Microsemi PS11.50 "S" (no suffix letter required, MX086-4 is only "S" screened)
- Designed for battery cell bypass
- Passivated mesa structure for very low leakage currents
- 4 die stacked in one package
- Hermetically sealed, ceramic surface mount power package

**60 Volts**  
**50 Amps**  
**2  $\mu$ s**

**BATTERY  
 BYPASS  
 CHARGE DIODE**

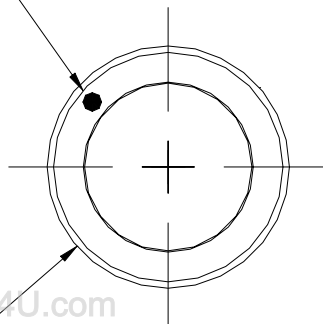
## Maximum Ratings @ 25°C (unless otherwise specified)

DESCRIPTION	SYMBOL	MAX.	UNIT
Peak Repetitive Reverse Voltage ( <b>NOT A BLOCKING DIODE!</b> )	$V_{RRM}$	60	Volts
Average Rectified Forward Current, $T_c \leq 125^\circ\text{C}$	$I_{F(ave)}$	50	Amps
Nonrepetitive Peak Surge Current, $t_p = 8.3$ ms, half-sinewave	$I_{FSM}$	300	Amps
Junction Temperature Range (for bypass operation)	$T_j$	-20 to +275	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-65 to +175	$^\circ\text{C}$
Thermal Resistance, Junction to Case:	$\theta_{JC}$	0.9	$^\circ\text{C/W}$

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR	$V_R = 60$ Vdc, $T_c = 25^\circ\text{C}$		1	10	$\mu\text{A}$
Forward Voltage pulse test, $p_w = 300$ $\mu\text{s}$ , $d/c \leq 2\%$	VF1	$I_F = 100$ mA, $T_c = 25^\circ\text{C}$	2.5		3.0	V
	VF2	$I_F = 5$ A, $T_c = 25^\circ\text{C}$	2.75		3.73	V
	VF3	$I_F = 10$ A, $T_c = 25^\circ\text{C}$	3.2		3.86	V

## Mechanical Outline

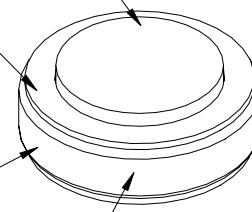
MARK: CATHODE DOT  
 USE BLACK INK



TUNGSTEN, Ni PLATE  
 2 PLACES

ALLOY 42, Ni PLATE  
 2 PLACES

MARK: SER#  
 USE BLACK INK



CERAMIC