

**Photovoltaic By-Pass Diode
120 Volts, 2.25 Amps**

PRODUCT PREVIEW

DESCRIPTION

Large area diode chip for medium current photovoltaic by-pass applications, or for higher current hybrid applications. The device is rated for 1A for applications where the device will be exposed to substantial radiation flux (space). For other applications, it may be operated at higher currents (see graph for Vf vs. If). A version with attached leads is available.

IMPORTANT: For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

KEY FEATURES

- Gold diffused for low forward voltage
- Epitaxial structure minimizes forward voltage drop
- Forward voltage decreases with radiation exposure
- Qualified for space applications
- Available in leaded configuration
- High voltage for series applications

APPLICATIONS/BENEFITS

- Increases efficiency of photovoltaic arrays
- Protects photovoltaic cells from reverse voltage

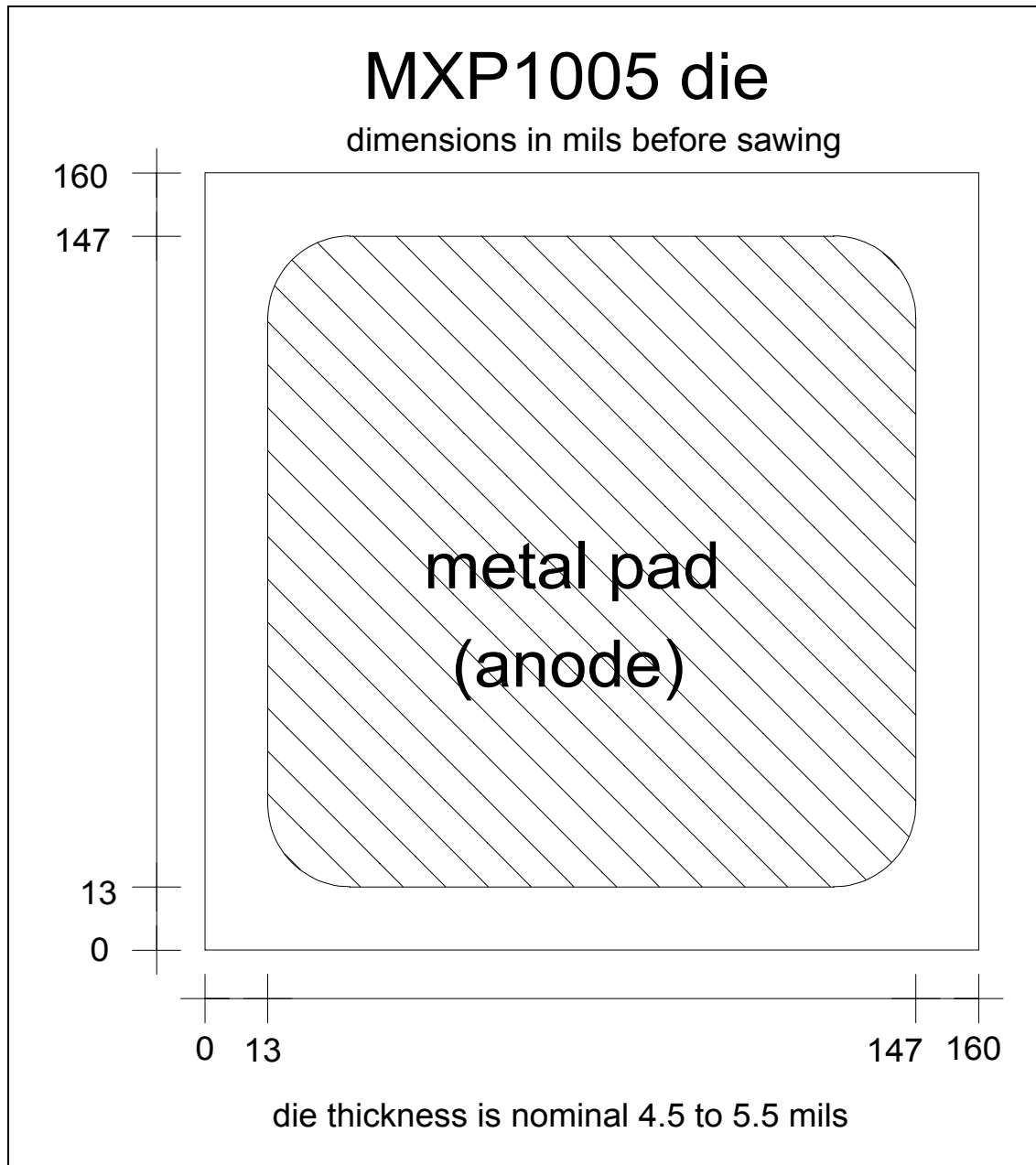
MAXIMUM RATINGS @ 25°C (UNLESS OTHERWISE SPECIFIED)

Description	Symbol	Max.	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	120	Volts
Working Peak Reverse Voltage	V_{RWM}	120	Volts
DC Blocking Voltage	V_R	120	Volts
Average Rectified Forward Current, $T_c \leq 135^\circ\text{C}$	$I_{F(ave)}$	2.25	Amps
Junction Temperature Range	T_j	-65 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +200	$^\circ\text{C}$

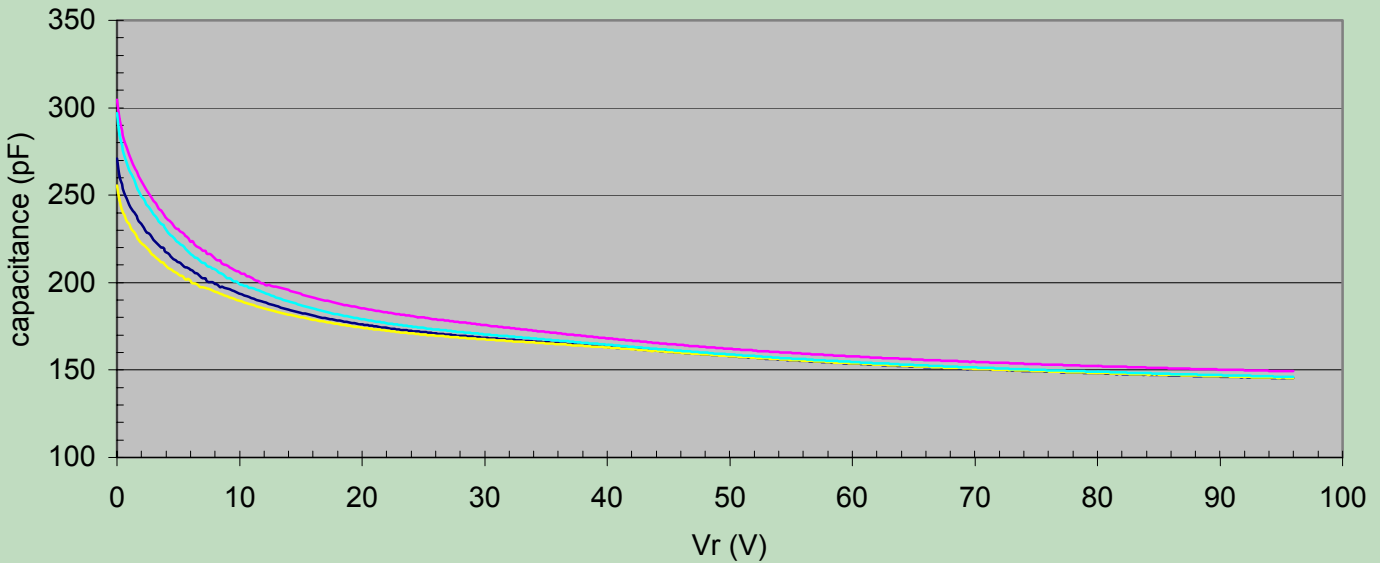
ELECTRICAL PARAMETERS

Description	Symbol	Conditions	Min	Typ.	Max	Unit
Reverse (Leakage) Current (in dark)	IR_{25}	$VR = 96 \text{ Vdc}, Ta = 25^\circ\text{C}$		2	10	μA
	IR_{150}	$VR = 96 \text{ Vdc}, Ta = 150^\circ\text{C}$		4	8	mA
Forward Voltage pulse test, $pw = 300 \mu\text{s}$	$VF1$	$IF = 2.25 \text{ A}, Ta = 25^\circ\text{C}$		720	840	mV
Junction Capacitance	$Cj1$	$VR = 4 \text{ Vdc}$		300	600	pF
Breakdown Voltage	BVR	$IR = 200 \mu\text{A}, Ta = 25^\circ\text{C}$	120	160		V

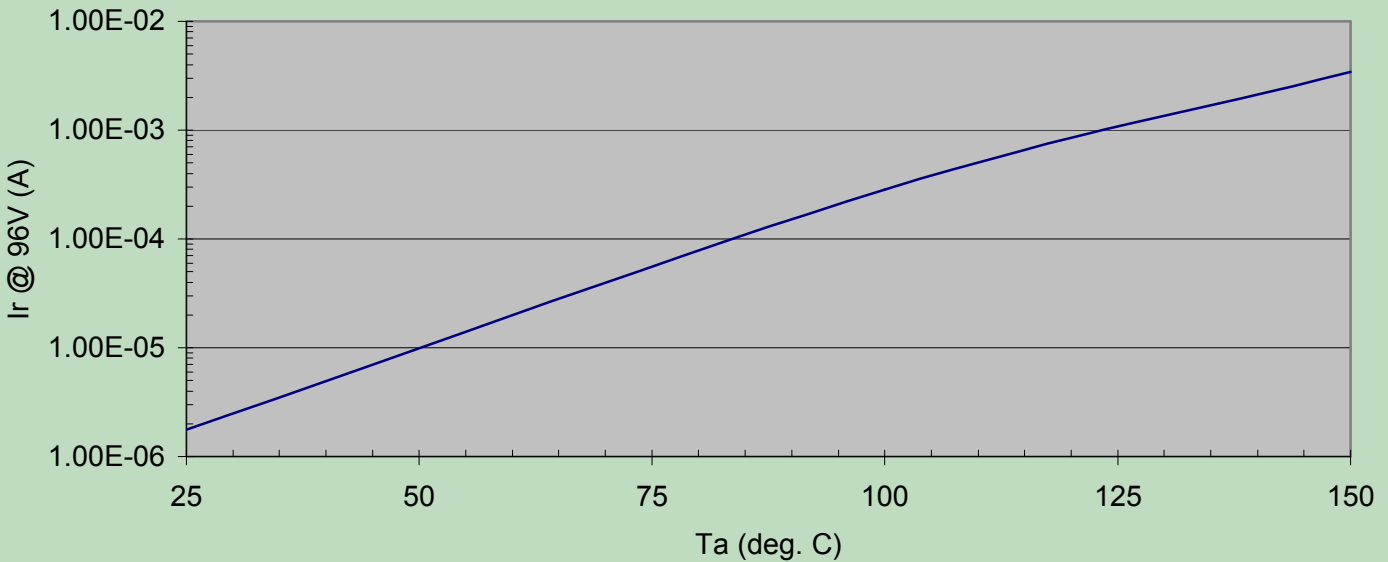
Mechanical Outline



MXP1005 typical capacitance vs. voltage

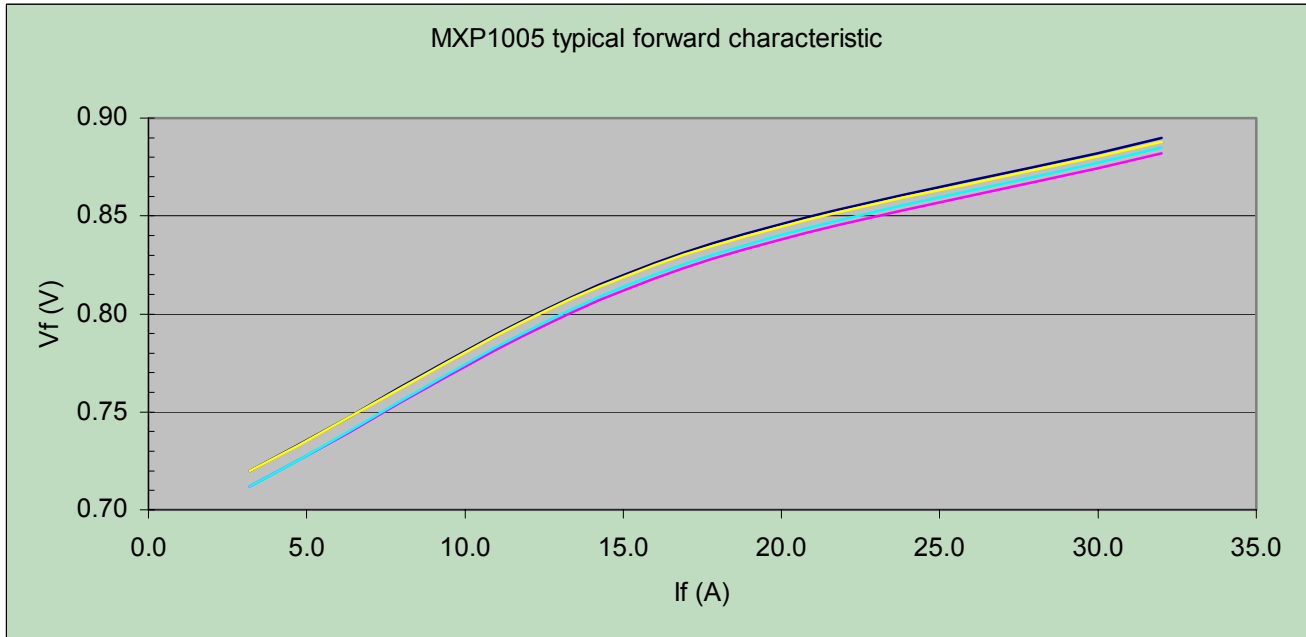


MXP1005 typical reverse current vs. temperature



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NOTES