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MSARW80G20A
(MX028)

Features

- Oxide passivated structure for very low leakage currents
- Epitaxial structure minimizes forward voltage drop
- Hermetically sealed, low profile ceramic surface mount power package
- Low package inductance
- Very low thermal resistance
- available with TXV (MSARW80G20AV) or S-level (MSARW80G20AS) screening i.a.w. Microsemi internal procedure PS11.50

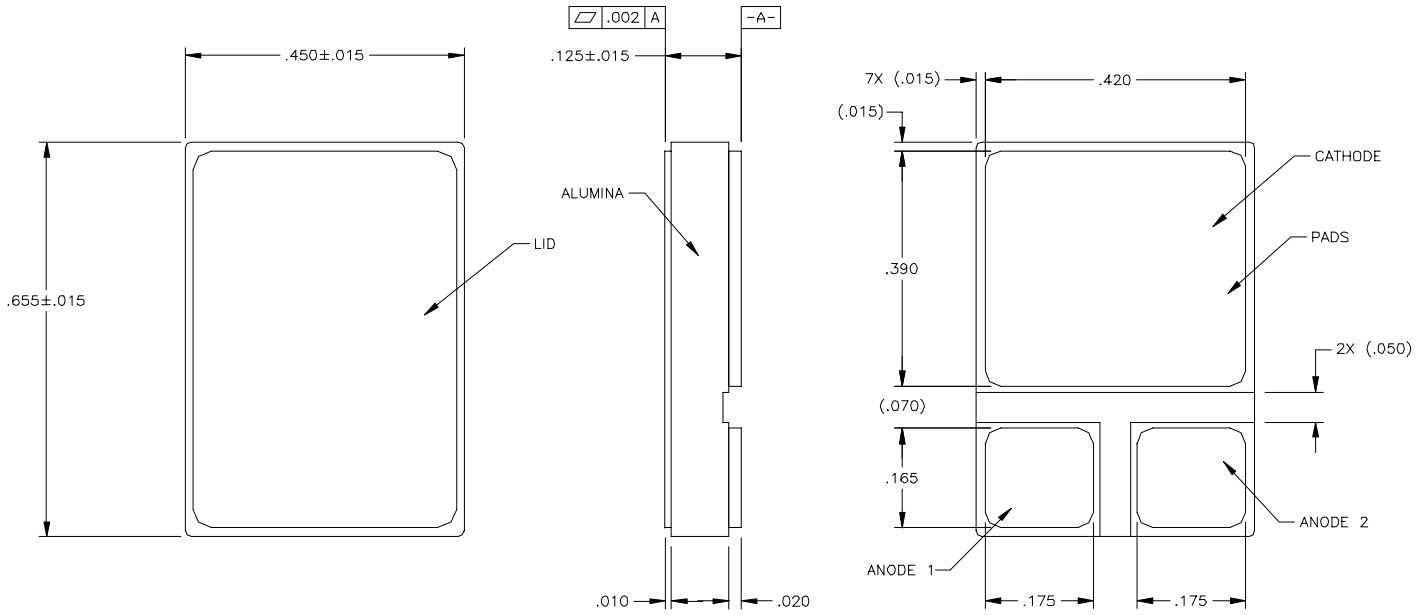
200 Volts
80 Amps
37 ns

ULTRAFAST RECTIFIER

Maximum Ratings @ 25°C (unless otherwise specified)

DESCRIPTION	SYMBOL	MAX.	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	200	Volts
Working Peak Reverse Voltage	V_{RWM}	200	Volts
DC Blocking Voltage	V_R	200	Volts
Average Rectified Forward Current, Tc≤ 135°C	$I_{F(ave)}$	80	Amps
Nonrepetitive Peak Surge Current, tp= 8.3 ms, half-sinewave	I_{FSM}	250	Amps
Junction Temperature Range	T_j	-65 to +200	°C
Storage Temperature Range	T_{stg}	-65 to +200	°C
Thermal Resistance, Junction to Case	θ_{JC}	0.8 (typ.0.35)	°C/W

Mechanical Outline



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Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR_{25}	VR= 200 Vdc, Tc= 25°C		-	250	µA
	IR_{100}	VR= 200 Vdc, Tc= 100°C		-	10	mA
Forward Voltage pulse test, pw= 300 µs d/c≤ 2%	VF1	IF= 5 A, Tc= 25°C		720	750	mV
	VF2	IF= 25 A, Tc= 25°C		860	900	mV
	VF3	IF= 50 A, Tc= 25°C		950	1050	mV
	VF4	IF= 80 A, Tc= 25°C		1050		mV
	VF5	IF= 50 A, Tc= -55°C			1150	mV
	VF6	IF= 50 A, Tc= 100°C		830		mV
Junction Capacitance	Cj1	VR= 10 Vdc			500	pF
Reverse Recovery Time	trr	IF= 9.9A, dIF/dt= 200A/µs, Vr= 30V		35	37	ns
Reverse Recovery Current	$I_{RM(rec)}$	IF= 9.9A, dIF/dt= 200A/µs, Vr= 30V		5	5.5	A
Breakdown Voltage	BVR	IR= 250 µA, Tc= 25°C	200			V