

Features

- Platinum/Tungsten schottky barrier for low forward voltage drop
- Oxide passivated structure for very low leakage currents
- Guard ring protection for increased reverse energy capability
- Epitaxial structure minimizes forward voltage drop
- Hermetically sealed, low profile ceramic surface mount power package
- Low package inductance
- Very low thermal resistance
- TXV-level (MSASC150H45AV) or S-level (MSASC150H45AS) screening i.a.w. Microsemi Internal Procedure PS 11.50 available

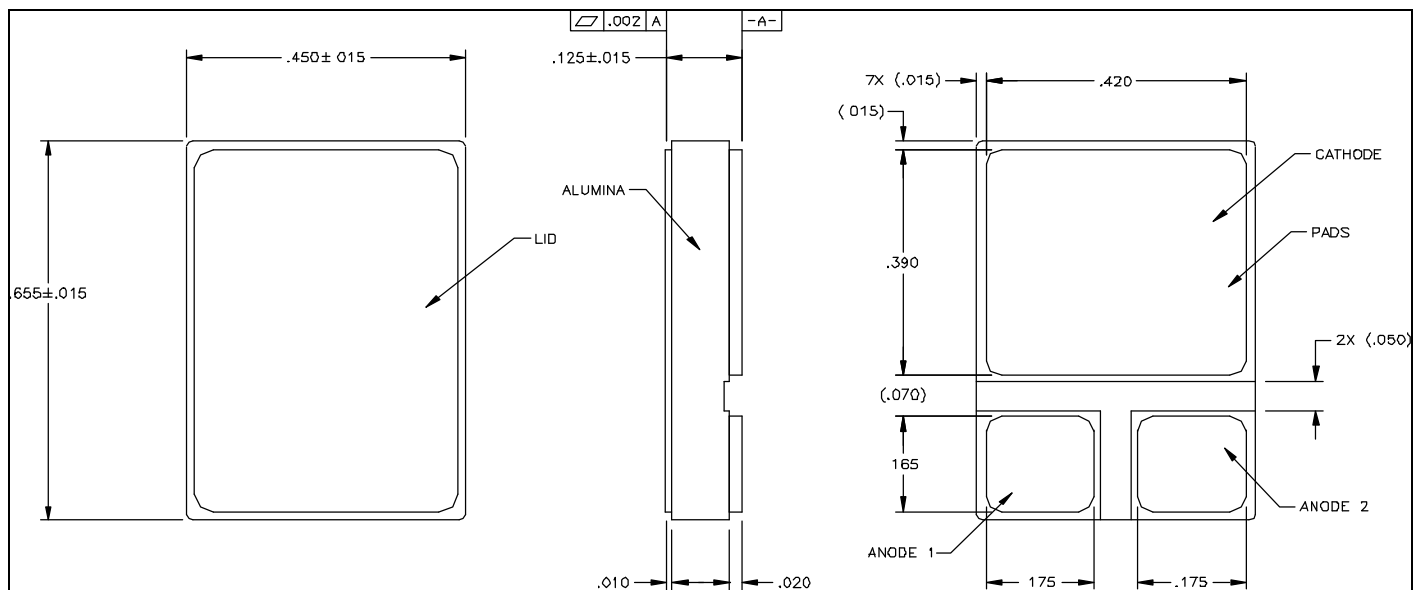
45 Volts
150 Amps

LOW VOLTAGE
DROP SCHOTTKY
DIODE

Maximum Ratings @ 25°C (unless otherwise specified)

DESCRIPTION	SYMBOL	MAX.	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	45	Volts
Working Peak Reverse Voltage	V_{RWM}	45	Volts
DC Blocking Voltage	V_R	45	Volts
Average Rectified Forward Current, $T_c \leq 135^\circ\text{C}$	$I_{F(ave)}$	150	Amps
derating, forward current, $T_c \geq 135^\circ\text{C}$	dl_F/dT	(3.75)	Amps/ $^\circ\text{C}$
Nonrepetitive Peak Surge Current, $t_p = 8.3$ ms, half-sinewave	I_{FSM}	500	Amps
Peak Repetitive Reverse Surge Current, $t_p = 1\mu\text{s}$, $f = 1$ kHz	I_{RRM}	2	Amp
Junction Temperature Range	T_j	-65 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +175	$^\circ\text{C}$
Thermal Resistance, Junction to Case	θ_{JC}	0.25	$^\circ\text{C}/\text{W}$

Mechanical Outline



Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage)	IR ₂₅	VR= 45 Vdc, Tc= 25°C		1	10	mA
	IR ₁₀₀	VR= 45 Vdc, Tc= 100°C		125	400	
Current	IR ₁₂₅	VR= 45 Vdc, Tc= 125°C		500		mA
Forward Voltage pulse test, pw= 300 μs d/c≤ 2%	VF1	IF= 20A, Tc= 25°C		400	450	mV
	VF2	IF= 50A, Tc= 25°C		500	565	mV
	VF3	IF= 100A, Tc= 25°C		650	730	mV
	VF4	IF= 150A, Tc= 25°C		770	900	mV
	VF5	IF= 50A, Tc= -55°C		580	670	mV
	VF6	IF= 50A, Tc= 125°C		420	500	mV
	VF7	IF= 100A, Tc= 125°C		590	-	mV
	VF8	IF= 10 mA, Tc= 25°C		135		mV
	VF9	IF= 50 mA, Tc= 25°C		175		mV
	VF10	IF= 100 mA, Tc= 25°C		195		mV
Junction Capacitance	Cj1	VR= 10 Vdc		4500	4900	pF
	Cj2	VR= 5 Vdc		6400		pF
Breakdown Voltage	BVR	IR= 5 mA, Tc= 25°C	45	55		V
		IR= 5 mA, Tc= -55°C	45	50		V