

## 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, $T_c \geq 135^\circ\text{C}$	$df/dT$	(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	$\theta_{JC}$	0.25	$^\circ\text{C}/\text{W}$

## Mechanical Outline



# MSASC150H50A



## Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage)	IR <sub>25</sub>	VR= 45 Vdc, Tc= 25°C		1	10	mA
	IR <sub>100</sub>	VR= 45 Vdc, Tc= 100°C		125	400	
Current	IR <sub>125</sub>	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