

**MSASC100W45H**  
**MSASC100W45HR**

## Features

- Tungsten schottky barrier
- 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
- Available as standard polarity (strap-to-anode, MSASC100W45H) and reverse polarity (strap-to-cathode: MSASC100W45HR)

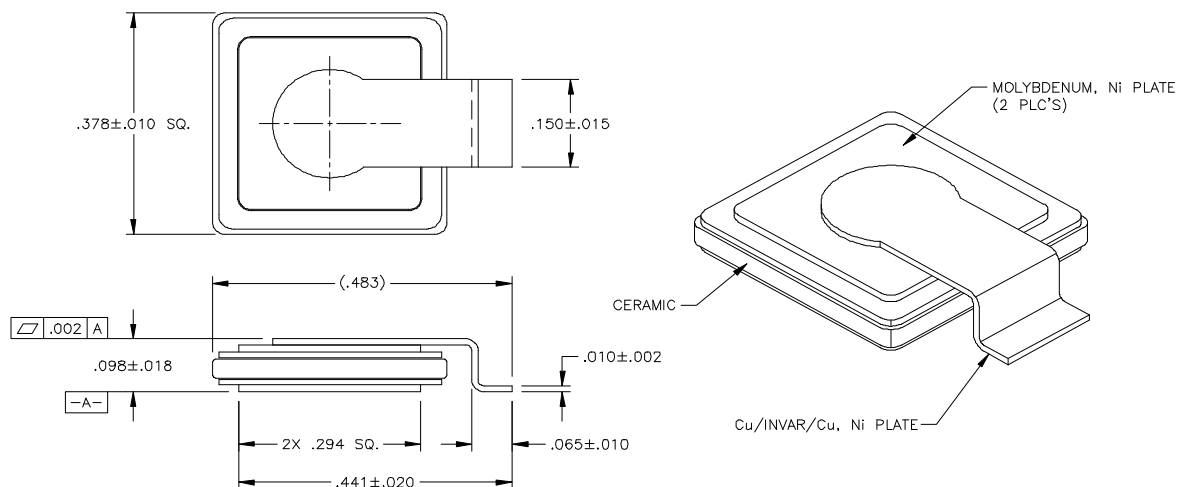
**45 Volts**  
**100 Amps**

**SURFACE MOUNT**  
**LOW LEAKAGE**  
**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, $T_c \leq 145^\circ\text{C}$	$I_{F(ave)}$	100	Amps
derating, forward current, $T_c \geq 145^\circ\text{C}$	$dl_F/dT$	3.3	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:	$\theta_{JC}$	0.35 0.5	$^\circ\text{C/W}$
	MSASC100W45H MSASC100W45HR		

## Mechanical Outline



# MSASC100W45H MSASC100W45HR

## Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR <sub>25</sub>	VR= 45 Vdc, Tc= 25°C		.01	1	mA
	IR <sub>125</sub>	VR= 45 Vdc, Tc= 125°C		10	100	mA
Forward Voltage pulse test, pw= 300 μs d/c≤ 2%	VF1	IF= 10A, Tc= 25°C		500	550	mV
	VF2	IF= 20A, Tc= 25°C		560	600	mV
	VF3	IF= 40A, Tc= 25°C		610	675	mV
	VF4	IF= 80A, Tc= 25°C		740	800	mV
	VF5	IF= 100A, Tc= 25°C		800		mV
	VF6	IF= 20A, Tc= -55°C		650	700	mV
	VF7	IF= 20A, Tc= 125°C		450		mV
Junction Capacitance	Cj1	VR= 10 Vdc		2500	3000	pF
	Cj2	VR= 5 Vdc		3500		pF
Breakdown Voltage	BVR	IR= 5 mA, Tc= 25°C		55		V
		IR= 5 mA, Tc= -55°C	45	50		V

VF vs IF Typical Curves

