

MSASC100H45H
MSASC100H45HR

Features

- Tungsten/Platinum 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, MSASC100H45H) and reverse polarity (strap-to-cathode: MSASC100H45HR)

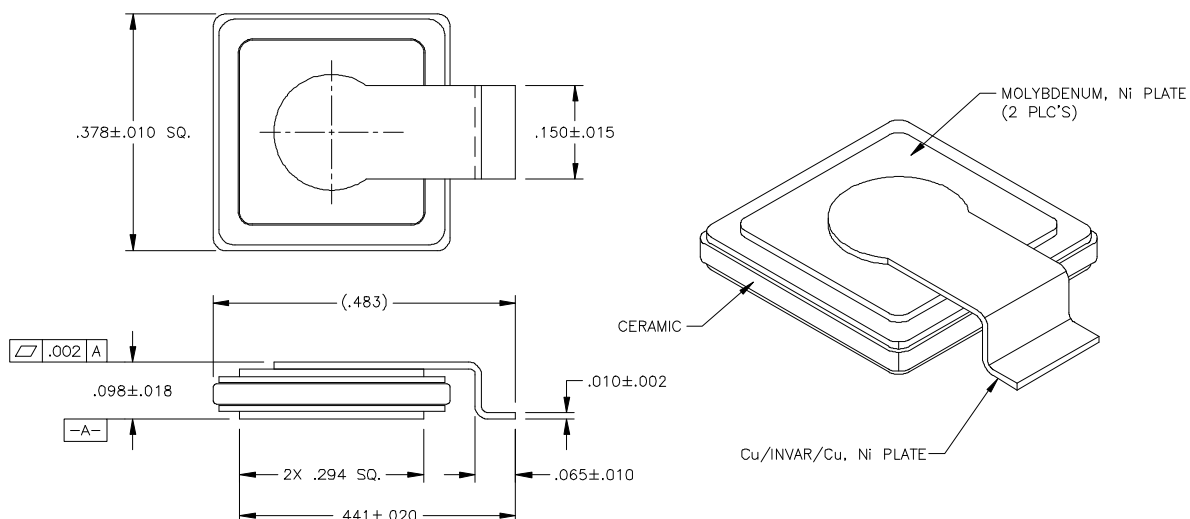
45 Volts
100 Amps

SURFACE MOUNT
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, $T_c \leq 125^\circ\text{C}$	$I_{F(ave)}$	100	Amps
derating, forward current, $T_c \geq 125^\circ\text{C}$	dI_F/dT	4	Amps/ $^\circ\text{C}$
Nonrepetitive Peak Surge Current, $t_p = 8.3$ ms, half-sinewave	I_{FSM}	500	Amps
Peak Repetitive Reverse Surge Current, $t_p = 1\mu\text{s}$, $f = 1\text{kHz}$	I_{RRM}	2	Amp
Junction Temperature Range	T_j	-65 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance, Junction to Case:	θ_{JC}	MSASC100H45H 0.35 MSASC100H45HR 0.5	$^\circ\text{C/W}$

Mechanical Outline



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Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR ₂₅	VR= 45 Vdc, Tc= 25°C		2	10	mA
	IR ₁₂₅	VR= 45 Vdc, Tc= 100°C		200	250	mA
Forward Voltage	VF1	IF= 10A, Tc= 25°C		340	380	mV
pulse test,	VF2	IF= 20A, Tc= 25°C		380	430	mV
pw= 300 μs	VF3	IF= 40A, Tc= 25°C		450	520	mV
d/c≤ 2%	VF4	IF= 80A, Tc= 25°C		580	650	mV
	VF5	IF= 100A, Tc= 25°C		650		mV
	VF6	IF= 20A, Tc= -55°C		470	550	mV
	VF7	IF= 20A, Tc= 125°C		300		mV
Junction Capacitance	Cj1	VR= 10 Vdc		2800	3300	pF
	Cj2	VR= 5 Vdc		4000		pF
Breakdown Voltage	BVR	IR= 5 mA, Tc= 25°C		55		V
		IR= 5 mA, Tc= -55°C	45	50		V