

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)

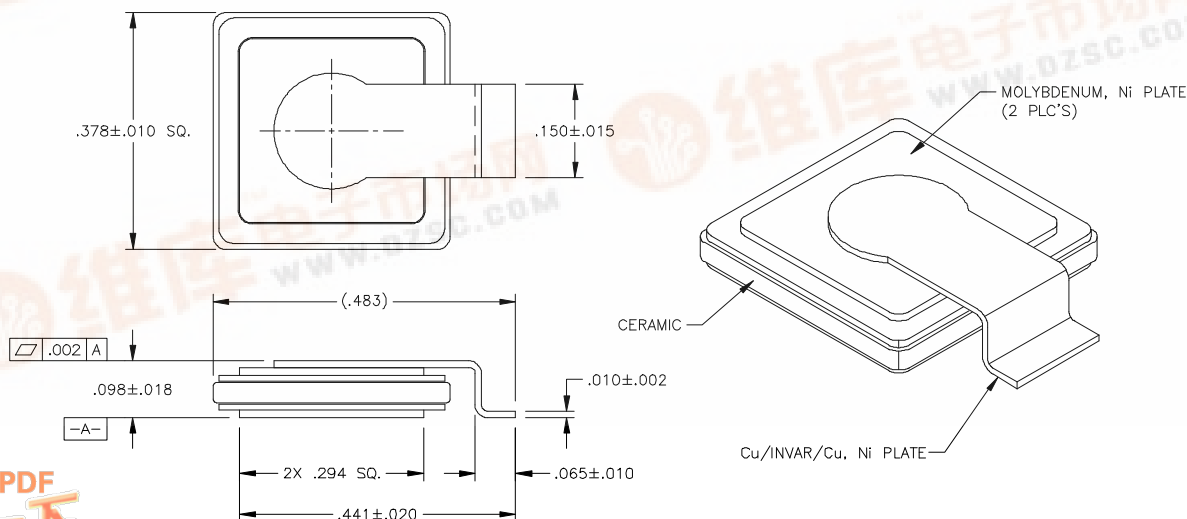
45 Volts
100 Amps

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/°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	°C
Storage Temperature Range	T_{stg}	-65 to +150	°C
Thermal Resistance, Junction to Case:	θ_{JC}	MSASC100H45H 0.35 MSASC100H45HR 0.5	°C/W

Mechanical Outline



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Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	$I_{R_{25}}$	$V_R = 45 \text{ Vdc}$, $T_c = 25^\circ\text{C}$		2	10	mA
	$I_{R_{125}}$	$V_R = 45 \text{ Vdc}$, $T_c = 100^\circ\text{C}$		200	250	mA
Forward Voltage	VF1	$I_F = 10\text{A}$, $T_c = 25^\circ\text{C}$		340	380	mV
pulse test,	VF2	$I_F = 20\text{A}$, $T_c = 25^\circ\text{C}$		380	430	mV
pw= 300 μs	VF3	$I_F = 40\text{A}$, $T_c = 25^\circ\text{C}$		450	520	mV
d/c $\leq 2\%$	VF4	$I_F = 80\text{A}$, $T_c = 25^\circ\text{C}$		580	650	mV
	VF5	$I_F = 100\text{A}$, $T_c = 25^\circ\text{C}$		650		mV
	VF6	$I_F = 20\text{A}$, $T_c = -55^\circ\text{C}$		470	550	mV
	VF7	$I_F = 20\text{A}$, $T_c = 125^\circ\text{C}$		300		mV
Junction Capacitance	Cj1	$V_R = 10 \text{ Vdc}$		2800	3300	pF
	Cj2	$V_R = 5 \text{ Vdc}$		4000		pF
Breakdown Voltage	BVR	$I_R = 5 \text{ mA}$, $T_c = 25^\circ\text{C}$		55		V
		$I_R = 5 \text{ mA}$, $T_c = -55^\circ\text{C}$	45	50		V