

**1N6822**  
**(MSASC150W45L)**

**1N6822R**  
**(MSASC150W45LR)**

**45 Volts**  
**150 Amps**

**LOW LEAKAGE**  
**SCHOTTKY DIODE**

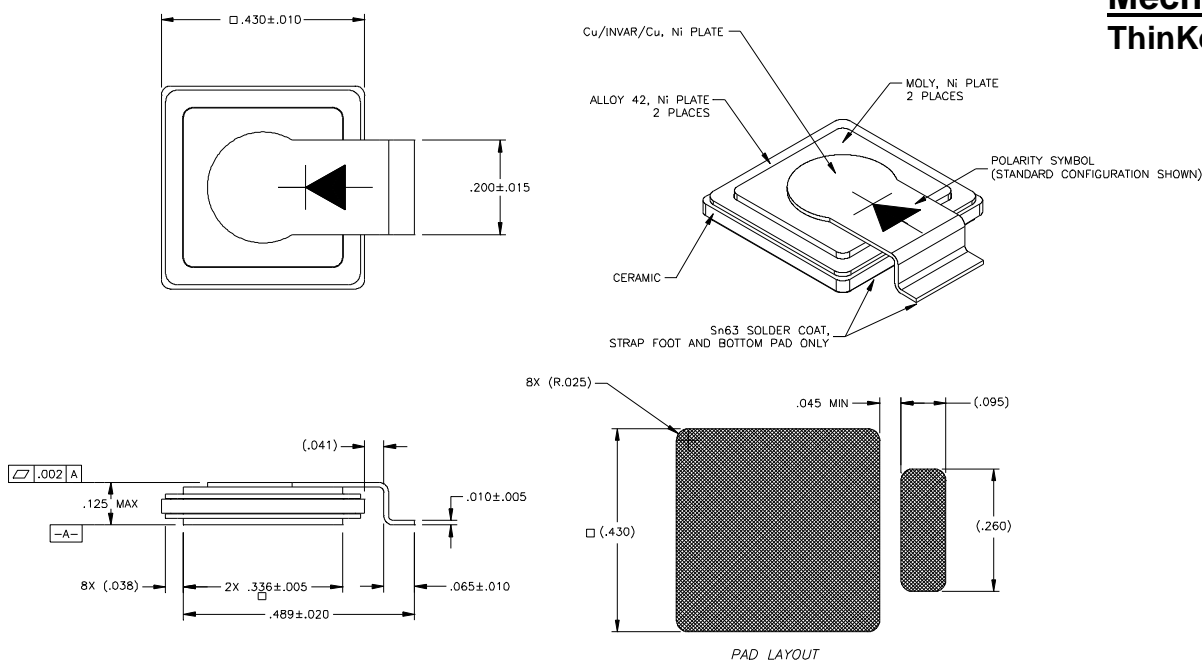
**Features**

- 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 is anode: 1N6822) and reverse polarity (strap is cathode: 1N6822R)

**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, $T_c \leq 125^\circ\text{C}$	$I_{F(ave)}$	150	Amps
derating, forward current, $T_c \geq 125^\circ\text{C}$	$di_F/dT$	4	Amps/ $^\circ\text{C}$
Nonrepetitive Peak Surge Current, $t_p = 8.3 \text{ ms}$ , half-sinewave	$I_{FSM}$	750	Amps
Peak Repetitive Reverse Surge Current, $t_p = 1 \mu\text{s}$ , $f = 1 \text{ kHz}$	$I_{RRM}$	2	Amp
Junction Temperature Range	$T_j$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Thermal Resistance, Junction to Case:	$\theta_{JC}$	0.20 0.35	$^\circ\text{C/W}$
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**Mechanical Outline**  
**ThinKey™3**



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**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>100</sub>	VR= 45 Vdc, Tc= 100°C		2	-	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		475	-	mV
	VF2	IF= 50A, Tc= 25°C		550	600	mV
	VF3	IF= 100A, Tc= 25°C		630	700	mV
	VF4	IF= 150A, Tc= 25°C		700	760	mV
	VF5	IF= 200A, Tc= 25°C		750	-	mV
	VF6	IF= 50A, Tc= -55°C		650	720	mV
	VF7	IF= 50A, Tc= 125°C		440	500	mV
	VF8	IF= 100A, Tc= -55°C		700	800	mV
	VF9	IF= 100A, Tc= 125°C		560	650	mV
	VF10	IF= 150A, Tc= -55°C		-	860	mV
	VF11	IF= 150A, Tc= 125°C		-	740	mV
	VF12	IF= 10 mA, Tc= 25°C		265	-	mV
	VF13	IF= 50 mA, Tc= 25°C		310	-	mV
	VF14	IF= 100 mA, Tc= 25°C		330	-	mV
Junction Capacitance	Cj1	VR= 10 Vdc		3800	4400	pF
	Cj2	VR= 5 Vdc		TBD		pF
Breakdown Voltage	BVR	IR= 1 mA, Tc= 25°C		60		V
		IR= 1 mA, Tc= -55°C	45	50		V