

MSARS200S20LP MSARS200S20LRP

Features

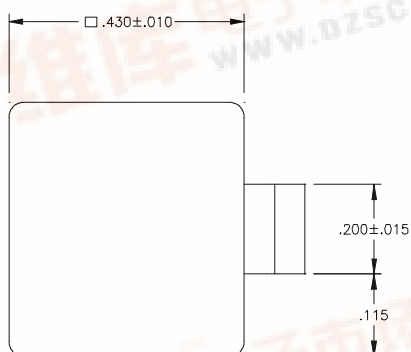
- passivated mesa structure for very low leakage currents
- Epitaxial structure minimizes forward voltage drop
- Low profile plastic surface mount package with CTE matched base
- Low package inductance
- Very low thermal resistance
- Available as standard polarity (strap-to-anode, MSARS200S20LP) and reverse polarity (strap-to-cathode: MSARS200S20LRP)

**200 Volts
200 Amps**

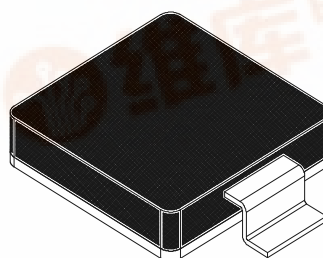
**HIGH CURRENT
CAPABILITY &
LOW VOLTAGE
DROP STANDARD
RECOVERY
RECTIFIER**

Maximum Ratings @ 25°C (unless otherwise specified)

DESCRIPTION	SYMBOL	MAX.	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	200	Volts
Working Peak Reverse Voltage	V_{RWM}	200	Volts
DC Blocking Voltage	V_R	200	Volts
Average Rectified Forward Current, $T_c \leq 125^\circ\text{C}$	$I_{F(ave)}$	200	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}	750	Amps
Junction Temperature Range	T_j	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	$^\circ\text{C}$
Thermal Resistance, Junction to Case:	θ_{JC}	0.20	$^\circ\text{C/W}$



Mechanical Outline Plastic ThinKey™3



Molybdenum pad with Ni plating and Sn63 solder finish

Cu/Invar/Cu strap with Ni plating and Sn63 solder finish on foot

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Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR ₂₅	VR= 200 Vdc, Tc= 25°C	-	1	50	μA
	IR ₁₀₀	VR= 200 Vdc, Tc= 100°C	-	10	-	μA
	IR ₁₂₅	VR= 200 Vdc, Tc= 125°C	-	25	1000	μA
Forward Voltage pulse test, pw= 300 μs d/c≤ 2%	VFa ₂₅	IF= 10 mA, Tc= 25°C		570	-	mV
	VFb ₂₅	IF= 100 mA, Tc= 25°C		640	-	mV
	VFc ₂₅	IF= 500 mA, Tc= 25°C		700	-	mV
	VFa ₁₂₅	IF= 10 mA, Tc= 125°C		375	-	mV
	VFb ₁₂₅	IF= 100 mA, Tc= 125°C		470	-	mV
	VFc ₁₂₅	IF= 500 mA, Tc= 125°C		540	-	mV
	VFa ₋₅₅	IF= 10 mA, Tc= -55°C		710	-	mV
	VFb ₋₅₅	IF= 100 mA, Tc= -55°C		770	-	mV
	VFc ₋₅₅	IF= 500 mA, Tc= -55°C		810	-	mV
	VF1	IF= 5 A, Tc= 25°C		780	830	mV
	VF2	IF= 10 A, Tc= 25°C		810	-	mV
	VF3	IF= 25 A, Tc= 25°C		845	900	mV
	VF4	IF= 50 A, Tc= 25°C		875	940	mV
	VF5	IF= 100 A, Tc= 25°C		905	975	mV
	VF6	IF= 150 A, Tc= 25°C		1010	-	mV
	VF7	IF= 200 A, Tc= 25°C		1100	-	mV
	VF8	IF= 250 A, Tc= 25°C		1165	-	mV
	VF9	IF= 300 A, Tc= 25°C		1250	-	mV
	VF10	IF= 5 A, Tc= -55°C		880	930	mV
	VF11	IF= 10 A, Tc= -55°C		900	-	mV
	VF12	IF= 25 A, Tc= -55°C		930	990	mV
	VF13	IF= 50 A, Tc= -55°C		955	1030	mV
	VF14	IF= 100 A, Tc= -55°C		985	1070	mV
	VF15	IF= 5 A, Tc= 125°C		640	690	mV
	VF16	IF= 10 A, Tc= 125°C		670	-	mV
	VF17	IF= 25 A, Tc= 125°C		715	775	mV
	VF18	IF= 50 A, Tc= 125°C		750	825	mV
	VF19	IF= 100 A, Tc= 125°C		790	865	mV
Junction Capacitance	Cj1	VR= 10 Vdc		1500	2250	pF
Breakdown Voltage	BVR	IR= 500 μA, Tc= 25°C	200	205	n/a	V
Reverse Recovery Time	trr	IF= .5 A, IR= 1 A, IRR= .25 A		1.5	5	μs