

# MSARS50S20Y

# MSARS50S20YR

## Features

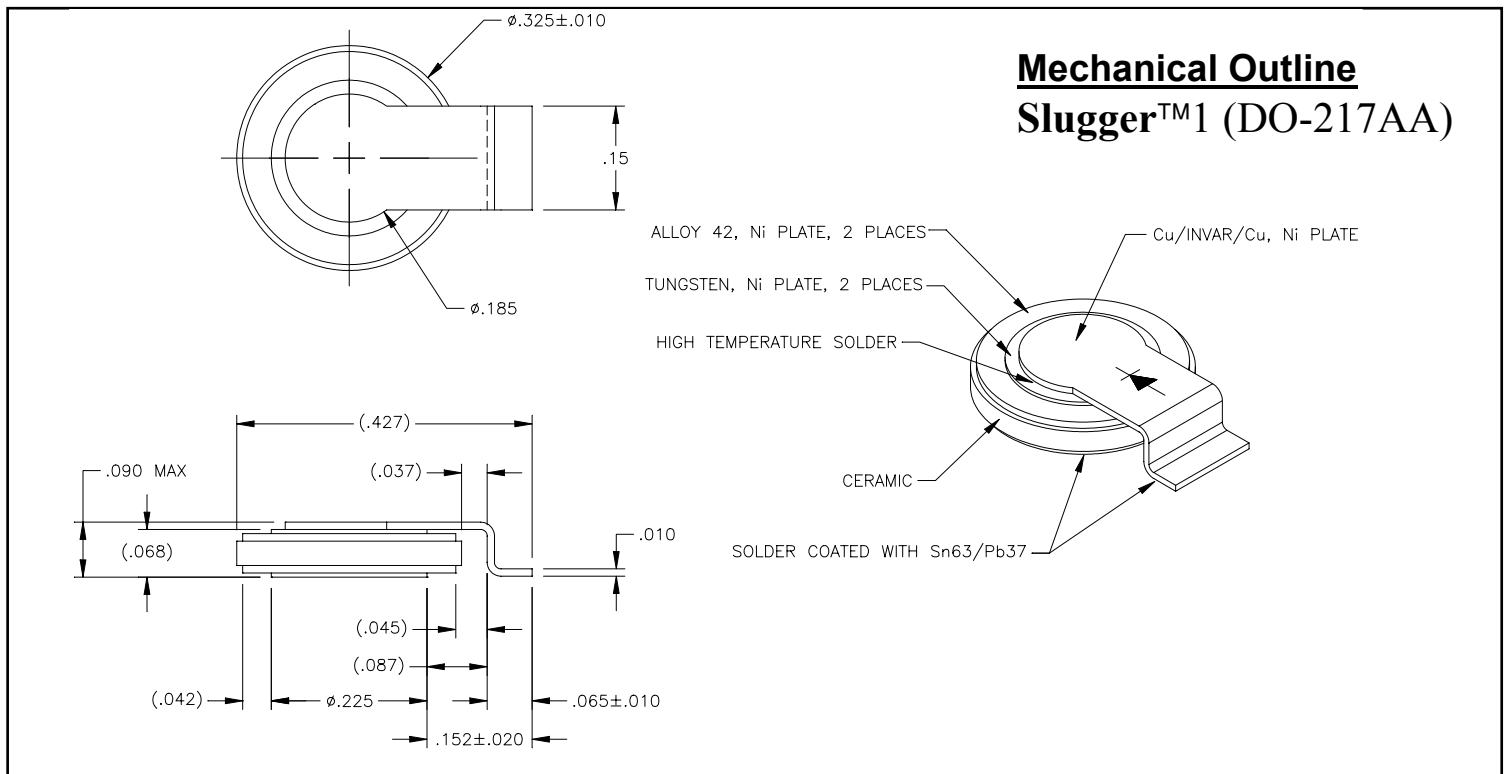
- passivated mesa structure for very low leakage currents
- Epitaxial structure minimizes forward voltage drop
- Hermetically sealed, low profile ceramic
- Low package inductance
- Very low thermal resistance
- Available as standard polarity (strap-to-anode, MSARS50S20Y) and reverse polarity (strap-to-cathode: MSARS50S20YR)
- Available with Space-level equivalent (add "S"-suffix to the part number) or TX-level equivalent screening (add "V"-suffix to the part number), per PS11.50
- Add -1 suffix for jumper less and gold plate version, i.e. MSARS50S20YS-1

**200 Volts**  
**50 Amps**  
**2  $\mu$ s**

**LOW VOLTAGE**  
**DROP STANDARD**  
**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, $T_c \leq 125^\circ\text{C}$	$I_{F(ave)}$	50	Amps
Nonrepetitive Peak Surge Current, $t_p = 8.3$ ms, half-sinewave	$I_{FSM}$	375	Amps
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:	$\theta_{JC}$	1.0	$^\circ\text{C/W}$



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## Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR <sub>25</sub>	VR= 200 Vdc, Tc= 25°C		1	10	μA
	IR <sub>125</sub>	VR= 200 Vdc, Tc= 125°C		-	0.3	mA
Forward Voltage pulse test, pw= 300 μs d/c≤ 2%	VF1	IF= 5 A, Tc= 25°C		810	840	mV
	VF2	IF= 10 A, Tc= 25°C		835	875	mV
	VF3	IF= 25 A, Tc= 25°C		875	925	mV
	VF4	IF= 50 A, Tc= 25°C		915	975	mV
	VF5	IF= 100 A, Tc= 25°C		975	-	mV
	VF6	IF= 5 A, Tc= -55°C		910	950	mV
	VF7	IF= 10 A, Tc= -55°C		930	1000	mV
	VF8	IF= 25 A, Tc= -55°C		970	1050	mV
	VF9	IF= 50 A, Tc= -55°C		1000	1100	mV
	VF10	IF= 5 A, Tc= 125°C		675	725	mV
	VF11	IF= 10 A, Tc= 125°C		710	775	mV
	VF12	IF= 25 A, Tc= 125°C		760	825	mV
	VF13	IF= 50 A, Tc= 125°C		800	875	mV
Junction Capacitance	Cj1	VR= 10 Vdc		300	400	pF
	Cj2	VR= 5 Vdc		400	-	pF
Breakdown Voltage	BVR	IR= 500 μA, Tc= 25°C	220	250	n/a	V
Reverse Recovery Time	trr	IF= .5 A, IR= 1 A, IRR= .25 A		1	2	μs

