Santa Ana, CA
Microsemi
Progress Powered by Technology

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1N6823
(MSASC150W100L)
1N6823R
(MSASC150W100LR)

100 Volts
150 Amps

LOW LEAKAGE SCHOTTKY DIODE

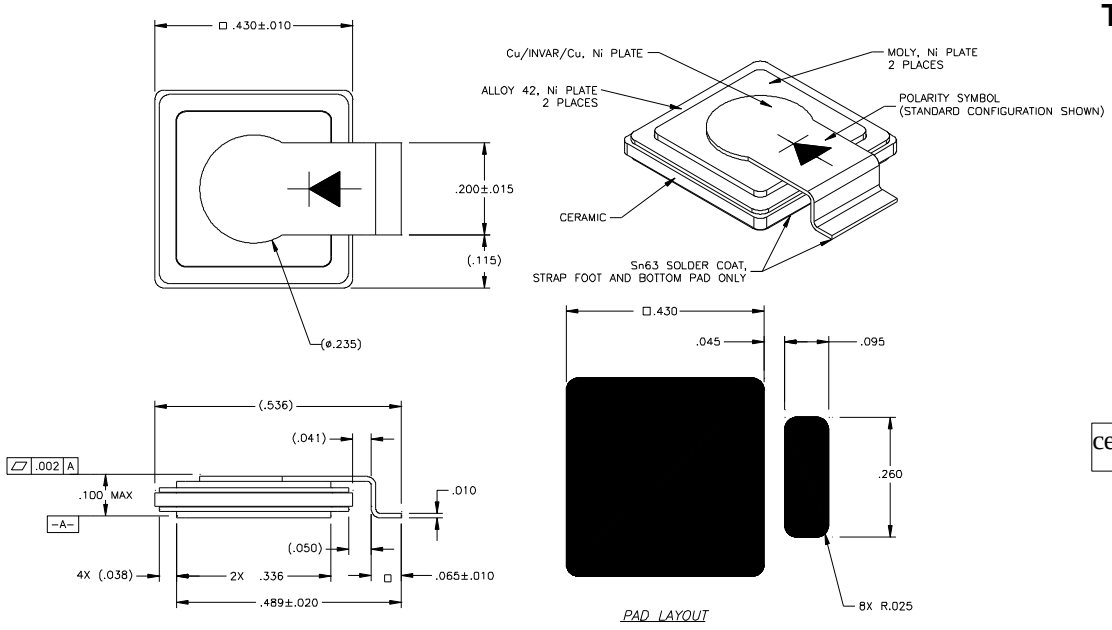
Features

- 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-to-anode, 1N6823) and reverse polarity (strap-to-cathode: 1N6823R)

Maximum Ratings @ 25℃ (unless otherwise specified)

DESCRIPTION		SYMBOL	MAX.	UNIT
Peak Repetitive Reverse Voltage		V_{RRM}	100	Volts
Working Peak Reverse Voltage		V_{RWM}	100	Volts
DC Blocking Voltage		V_R	100	Volts
Average Rectified Forward Current, Tc≤ 125°C		$I_{F(ave)}$	150	Amps
derating, forward current, Tc≥ 125°C		dI_F/dT	4	Amps/°C
Nonrepetitive Peak Surge Current, tp= 8.3 ms, half-sinewave		I_{FSM}	750	Amps
Peak Repetitive Reverse Surge Current, tp= 1µs, f= 1kHz		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:	1N6823 1N6823R	θ_{JC}	0.20 0.35	°C/W

Mechanical Outline
ThinKey™3



Low expansion coef. metal (W or Mo), Ni plated

Cu/Invar/Cu, Ni plated

ceramic

Datasheet# MSC1028A

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Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR_{25}	VR= 100 Vdc, Tc= 25°C		.01	5	mA
	IR_{100}	VR= 100 Vdc, Tc= 100°C		2	-	mA
	IR_{125}	VR= 100 Vdc, Tc= 125°C		20	100	mA
Forward Voltage pulse test, pw= 300 µs d/c≤ 2%	VF1	IF= 10A, Tc= 25°C		500	-	mV
	VF2	IF= 50A, Tc= 25°C		700	760	mV
	VF3	IF= 100A, Tc= 25°C		780	850	mV
	VF4	IF= 150A, Tc= 25°C		850	925	mV
	VF5	IF= 200A, Tc= 25°C		910	-	mV
	VF6	IF= 50A, Tc= -55°C		750	825	mV
	VF7	IF= 50A, Tc= 125°C		560	625	mV
	VF8	IF= 100A, Tc= -55°C		860	950	mV
	VF9	IF= 100A, Tc= 125°C		630	710	mV
	VF10	IF= 150A, Tc= 125°C		700	800	mV
	VF11	IF= 200A, Tc= 125°C		750	-	mV
	VF12	IF= 10 mA, Tc= 25°C		265	-	mV
	VF13	IF= 10 mA, Tc= 125°C		75	-	mV
	VF14	IF= 10 mA, Tc= -55°C		400	-	mV
	VF15	IF= 50 mA, Tc= 25°C		310	-	mV
	VF16	IF= 50 mA, Tc= 125°C		125	-	mV
	VF17	IF= 50 mA, Tc= -55°C		430	-	mV
	VF18	IF= 100 mA, Tc= 25°C		330	-	mV
	VF19	IF= 100 mA, Tc= 125°C		150	-	mV
	VF20	IF= 100 mA, Tc= -55°C		450	-	mV
	VF21	IF= 500 mA, Tc= 25°C		375	-	mV
	VF22	IF= 500 mA, Tc= 125°C		210	-	mV
	VF23	IF= 500 mA, Tc= -55°C		480	-	mV
Junction Capacitance	Cj1	VR= 10 Vdc		2600	3200	pF
	Cj2	VR= 5 Vdc		3700		pF
Breakdown Voltage	BVR	IR= 5 mA, Tc= 25°C	100	120		V
		IR= 5 mA, Tc= -55°C	100	115		V

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