

MSASC75W45F
MSASC75W45FR

Features

- Platinum schottky barrier
- Oxide passivated structure for 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: MSASC75W45F) and reverse polarity (strap is cathode: MSASC75W45FR)
- TXV-level (MSASC75W45FV) and S-level (MSASC75W45FS) screening i.a.w. Microsemi Internal Procedure PS11.50 are available

45 Volts
75 Amps

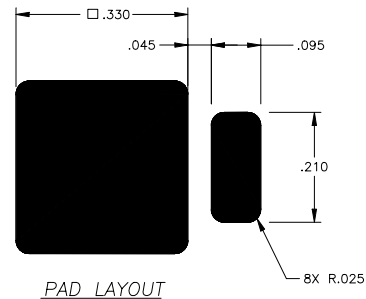
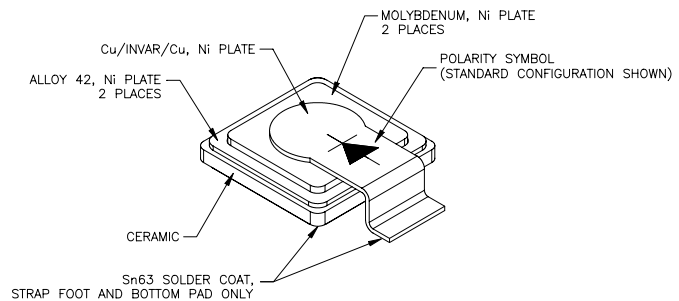
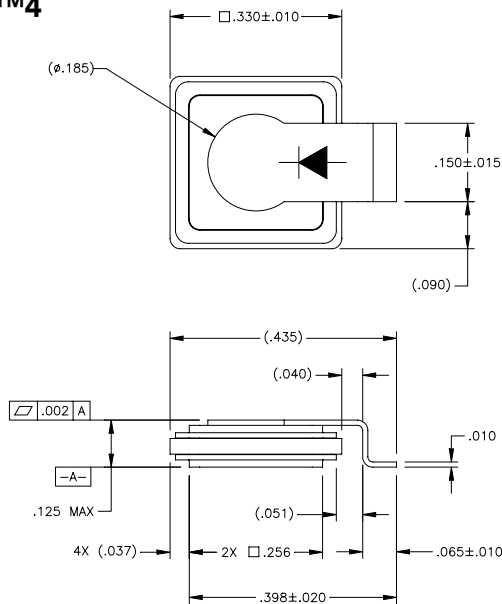
LOW LEAKAGE
CURRENT
SCHOTTKY DIODE

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, $T_c \leq 125^\circ\text{C}$	$I_{F(ave)}$	75	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}	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	-55 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +175	$^\circ\text{C}$
Thermal Resistance, Junction to Case:	θ_{JC}	0.50 0.65	$^\circ\text{C/W}$
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Mechanical Outline

ThinKey™4



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Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage)	IR ₂₅	VR= 45 Vdc, Tc= 25°C		100	750	uA
	IR ₁₂₅₋₁	VR= 12 Vdc, Tc= 125°C		1	-	mA
Current	IR ₁₂₅₋₂	VR= 36 Vdc, Tc= 125°C		2.5	-	mA
	IR ₁₂₅	VR= 45 Vdc, Tc= 125°C		4	50	mA
Forward Voltage pulse test, pw= 300 μs d/c≤ 2%	VF1	IF= 2 A, Tc= 25°C		435	-	mV
	VF2	IF= 10 A, Tc= 25°C		500	550	mV
	VF3	IF= 25 A, Tc= 25°C		550	625	mV
	VF4	IF= 50 A, Tc= 25°C		625	-	mV
	VF5	IF= 75 A, Tc= 25°C		685	760	mV
	VF6	IF= 100 A, Tc= 25°C		725	-	mV
	VF7	IF= 2 A, Tc= -55°C		550	-	mV
	VF8	IF= 10 A, Tc= -55°C		600	660	MV
	VF9	IF= 25 A, Tc= -55°C		630	700	MV
	VF10	IF= 50 A, Tc= -55°C		675	-	MV
	VF11	IF= 75 A, Tc= -55°C		715	800	mV
	VF12	IF= 2 A, Tc= 125°C		300	-	MV
	VF13	IF= 10 A, Tc= 125°C		385	440	MV
	VF14	IF= 25 A, Tc= 125°C		460	540	MV
	VF15	IF= 50 A, Tc= 125°C		540	-	MV
	VF16	IF= 75 A, Tc= 125°C		590	675	mV
		VF _a	IF= 100 mA, Tc= 25°C		350	-
	VF _b	IF= 100 mA, Tc= 125°C		200	-	mV
	VF _c	IF= 100 mA, Tc= -55°C		485	-	mV
Junction Capacitance	Cj1	VR= 10 Vdc		1900	-	pF
	Cj2	VR= 5 Vdc		2500	3000	pF
Breakdown Voltage	BVR	IR= 5 mA, Tc= 25°C		55		V
		IR= 5 mA, Tc= -55°C	45	47		V

