

1N6817 (MSASC25W100K) 1N6817R (MSASC25W100KR)

Features

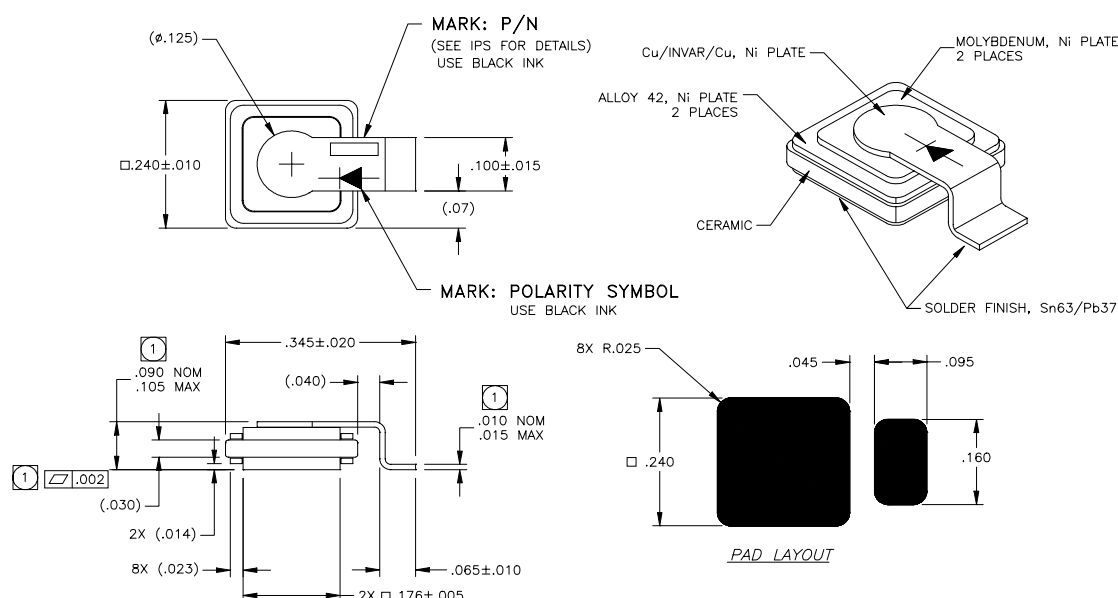
- Tungsten schottky barrier
- Oxide passivated structure
- Guard ring protection for increased reverse energy capability
- Epitaxial structure minimizes forward voltage drop
- Hermetically sealed, low profile ceramic surface mount power package
- Low package inductance
- Very low thermal resistance
- Available as standard polarity (strap is anode: 1N6817) and reverse polarity (strap is cathode: 1N6817R)
- TXV-level screening (MSASC25W100KV) or S-level (MSASC25W100KS) screening i.a.w. Microsemi internal procedure PS11.50 available

**100 Volts
25 Amps**

**LOW REVERSE
LEAKAGE
SCHOTTKY DIODE**

Maximum Ratings @ 25°C (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, $T_c \leq 145^\circ\text{C}$	$I_{F(ave)}$	25	Amps
derating, forward current, $T_c \geq 145^\circ\text{C}$	dlF/dT	(3.3)	Amps/ $^\circ\text{C}$
Nonrepetitive Peak Surge Current, $t_p = 8.3$ ms, half-sinewave	I_{FSM}	120	Amps
Peak Repetitive Reverse Surge Current, $t_p = 1\mu\text{s}$, $f = 1$ 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}	1N6817 1.25 1N6817R 1.35	$^\circ\text{C/W}$



PAD TOLERANCES		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
ROUGHNESS	DECIMAL	ANGULAR
63	.XX ± .01 .XXX ± .005	± 0.5°

**Mechanical Outline
ThinKey™2**

1N6817
(MSASC25W100K)

1N6817R
(MSASC25W100KR)

Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	IR_{25}	$VR = 100\text{ Vdc}, T_c = 25^\circ\text{C}$		7	300	μA
	IR_{125}	$VR = 100\text{ Vdc}, T_c = 125^\circ\text{C}$		2.5	15	mA
Forward Voltage pulse test, $pw = 300\text{ }\mu\text{s}$ $d/c \leq 2\%$	VF1	$IF = 5\text{ A}, T_c = 25^\circ\text{C}$		650	725	mV
	VF2	$IF = 10\text{ A}, T_c = 25^\circ\text{C}$		730	810	mV
	VF3	$IF = 20\text{ A}, T_c = 25^\circ\text{C}$		810	900	mV
	VF4	$IF = 50\text{ A}, T_c = 25^\circ\text{C}$		940	1020	mV
	VF7	$IF = 100\text{ A}, T_c = 25^\circ\text{C}$		1060	-	mV
	VF5	$IF = 20\text{ A}, T_c = -55^\circ\text{C}$		925	1025	mV
	VF6	$IF = 20\text{ A}, T_c = 125^\circ\text{C}$		670	800	mV
Junction Capacitance	Cj1	$VR = 10\text{ Vdc}$		370	500	pF
	Cj2	$VR = 5\text{ Vdc}$		500		pF
Breakdown Voltage	BVR	$IR = 1\text{ mA}, T_c = 25^\circ\text{C}$	100	120		V
		$IR = 1\text{ mA}, T_c = -55^\circ\text{C}$	100			V