

MSASC25W45K
(1N6816)
MSASC25W45KR
(1N6816R)

Features

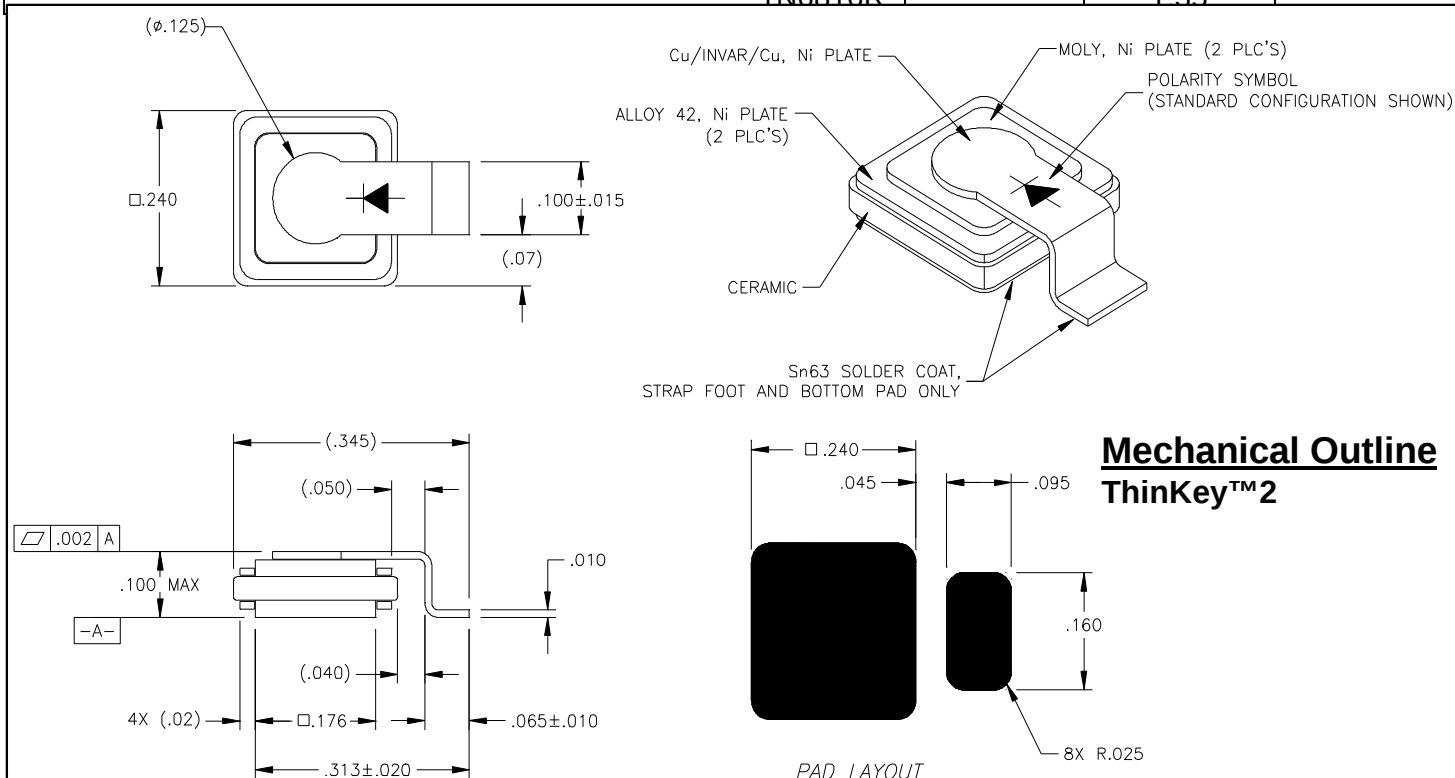
- Tungsten schottky barrier
- Oxide passivated structure for very low leakage currents
- Guard ring protection for increased reverse energy capability
- Epitaxial structure minimizes forward voltage drop
- Hermetically sealed, low profile ceramic surface mount power package
- Low package inductance
- Very low thermal resistance
- Available as standard polarity (strap-to-anode, 1N6816) and reverse polarity (strap-to-cathode: 1N6816R)

45 Volts
25 Amps

LOW LEAKAGE
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, $T_c \leq 145^\circ\text{C}$	$I_{F(ave)}$	25	Amps
derating, forward current, $T_c \geq 145^\circ\text{C}$	dl_F/dT	(3.3)	Amps/ $^\circ\text{C}$
Nonrepetitive Peak Surge Current, $t_p = 8.3$ ms, half-sinewave	I_{FSM}	125	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}	1.25 1.35	$^\circ\text{C/W}$
	1N6816 1N6816R		



MSASC25W45K (1N6816)

MSASC25W45KR (1N6816R)

Electrical Parameters

DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse (Leakage) Current	I_{R25}	$V_R = 45\text{ Vdc}$, $T_c = 25^\circ\text{C}$		5	300	μA
	I_{R125}	$V_R = 45\text{ Vdc}$, $T_c = 125^\circ\text{C}$		1.5	10	mA
Forward Voltage pulse test, $p_w = 300\text{ }\mu\text{s}$ $d/c \leq 2\%$	VF1	$I_F = 5\text{ A}$, $T_c = 25^\circ\text{C}$		540	600	mV
	VF2	$I_F = 10\text{ A}$, $T_c = 25^\circ\text{C}$		590	675	mV
	VF3	$I_F = 20\text{ A}$, $T_c = 25^\circ\text{C}$		680	775	mV
	VF4	$I_F = 50\text{ A}$, $T_c = 25^\circ\text{C}$		850	-	mV
	VF5	$I_F = 10\text{ A}$, $T_c = -55^\circ\text{C}$		680	775	mV
	VF6	$I_F = 10\text{ A}$, $T_c = 125^\circ\text{C}$		500	-	mV
Junction Capacitance	Cj1	$V_R = 10\text{ Vdc}$		525	600	pF
	Cj2	$V_R = 5\text{ Vdc}$		725		pF
Breakdown Voltage	BVR	$I_R = 1\text{ mA}$, $T_c = 25^\circ\text{C}$		55		V
		$I_R = 1\text{ mA}$, $T_c = -55^\circ\text{C}$	45	50		V