K105CS

SIDAC + Diode
Silicon Uni-directional

SIDAC
0.2 AMPERE RMS
105 VOLTS

FEATURES

- •High pulse current capability
- •Glass passivation insure reliable operation
- •Maximum dynamic holding current 50mA.
- •Compact package, SOT-23 package

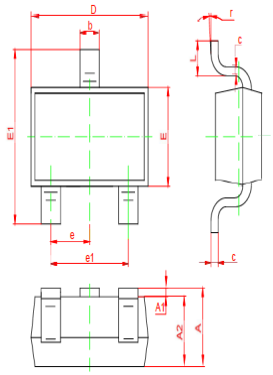
Application

- •Anion Generator
- •Pulse generating

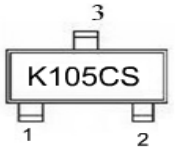
Mechanical Data

- •Terminals: Lead Free Plating
- •Polarity: Color band denotes anode
- •RoHS 2011/65/EU Compliant

SOT-23-3L



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 (BSC)		0.037 (BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
r	0°	8°	0°	8°



SIDAC PIN ASSIGNMENT	
3	Cathode
1	Anode
DIODE PIN ASSIGNMENT	
3	Cathode
2	Anode

MAXIMUM RATINGS AND ELECTRICAL CHARACTRISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

ABSOLUTE RATING

PARMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Peak Repetitive Off-State Voltage	TJ= -40 to 125℃, Sine Wave, 50 to 60 Hz	V_{DRM}	90	V
On-State RMS Current	TL= 80 ℃, All Conduction Angles	$I_{t(RMS)}$	0.2	A
Pulse On-State Current (SIDAC)	Waveform: 10/1000us, Tj=25 ℃	I_{TSM}	3	A
Peak Forward Surge Current (Diode)	8.3ms single half sine-wave @ Tj = 25 ℃	I_{FSM}	5	A
Operating Junction Temperature Range		Tj	-40 ~ +125	°C
Storage Temperature Range		Tstg	-40 ~ +150	°C

RATING AND CHARACTERISTIC CURVES K105CS

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Maximum lead Solder Temperature (Lead Length≧ 1/16 ” from Case, 10s Max)	T_L	260	°C

ELECTRICAL CHARACTERISTICS (Tj=25°C, unless otherwise specified)

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
SIDAC						
Peak repetitive forward or Reverse Blocking Current V_{DRM} =90V (pin1 to pin2)		I_{DRM}	---	---	10	uA
ON CHARACTERISTICS						
SIDAC						
Peak On-State Voltage	I_T=0.2A (pin1 to pin2)	V_{TM}	---	1.1	1.5	V
Break Over Voltage	IBO=5uA (pin1 to pin2)	V_{BO}	95	---	110	V
Holding Current	(pin1 to pin2)	I_H	---	30	50	mA
Diode						
Breakdown Voltage	IR=5uA (pin1 to pin3)	V_B	600	---	---	V
Forward Voltage	IF=0.2A (pin3 to pin1)	V_F	---	---	1.5	V
Leakage Current	VR=600V (pin1 to pin3)	I_R	---	---	5	uA

RATING AND CHARACTERISTIC CURVES K105CS

Fig.1- TYPICAL ON-STATE VOLTAGE

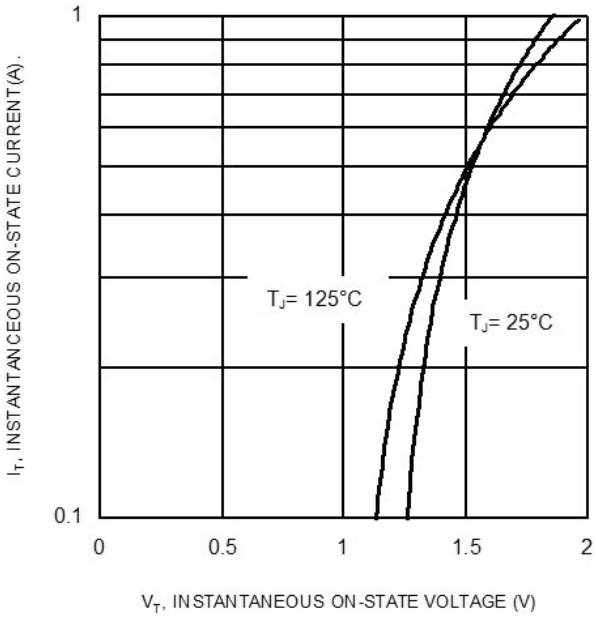


Fig.2- TYPICAL POWER DISSIPATION

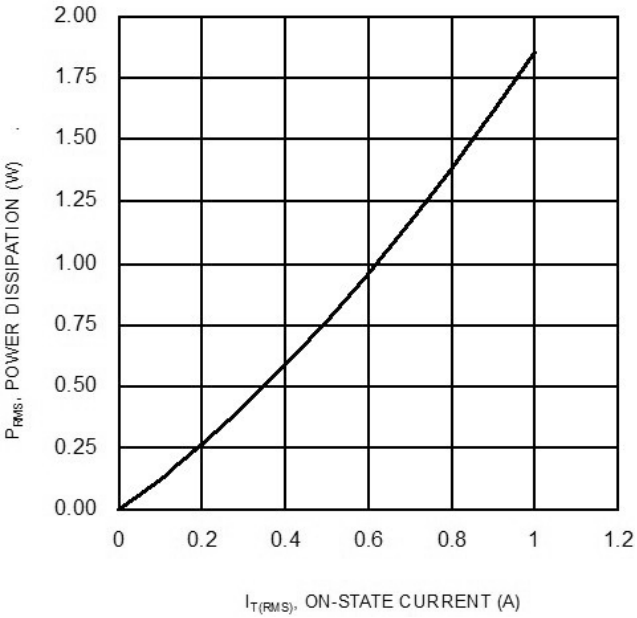


Fig.3- TYPICAL BREAKOVER VOLTAGE

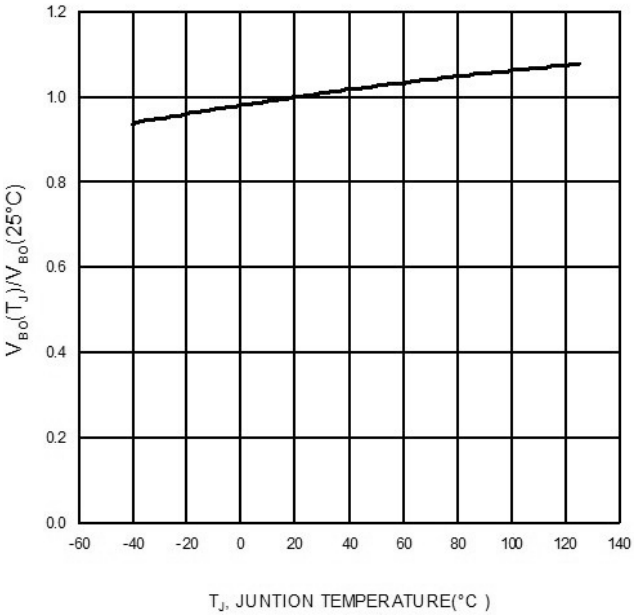


Fig.4- TYPICAL HOLDING CURRENT