

1A, 600V Standard Rectifier

FEATURES

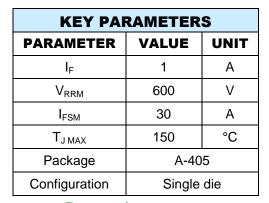
- AEC-Q101 qualified available
- Ideal for automated placement
- Compact package size
- High surge current capability
- Low power loss, high efficiency
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

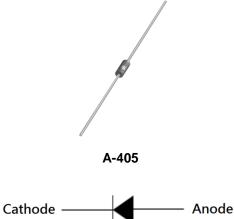
- DC to DC converter
- Switching mode converters and inverters
- General purpose

MECHANICAL DATA

- Case: A-405
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.200g (approximately)







ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)			
PARAMETER	SYMBOL	1N4005SG	UNIT
Marking code on the device		1N4005SG	
Repetitive peak reverse voltage	V _{RRM}	600	V
Reverse voltage, total rms value	V _{R(RMS)}	420	V
Forward current	I _F	1	Α
Surge peak forward current 8.3ms single half sine wave superimposed on rated load	I _{FSM}	30	Α
Junction temperature	TJ	-55 to +150	°C
Storage temperature	T _{STG}	-55 to +150	°C



THERMAL PERFORMANCE			
PARAMETER	SYMBOL	ТҮР	UNIT
Junction-to-lead thermal resistance	R _{θJL}	26	°C/W
Junction-to-ambient thermal resistance	R _{ÐJA}	46	°C/W
Junction-to-case thermal resistance	R _{eJC}	27	°C/W

Thermal Performance Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}C$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	ТҮР	MAX	UNIT
	$I_F = 0.5A, T_J = 25^{\circ}C$	V _F	0.89	0.94	V
Forward voltage ⁽¹⁾	$I_F = 1.0A, T_J = 25^{\circ}C$		0.94	1.00	V
Folward voltage	$I_F = 0.5A, T_J = 125^{\circ}C$		0.77	0.82	V
	$I_F = 1.0A, T_J = 125^{\circ}C$		0.83	0.88	V
Reverse current @ rated $V_R^{(2)}$	$T_J = 25^{\circ}C$	I _R	-	5	μA
	T _J = 125°C		-	100	μA
Junction capacitance	1MHz, V _R = 4.0V	CJ	14	-	pF

Notes:

1. Pulse test with PW = 0.3ms

2. Pulse test with PW = 30ms

ERING INFORMATION		
ORDERING CODE ⁽¹⁾	PACKAGE	PACKING
1N4005SG	A-405	5,000 / Tape & Reel
1N4005SG A0G	A-405	3,000 / Ammo box
1N4005SGH	A-405	5,000 / Tape & Reel
1N4005SGHA0G	A-405	3,000 / Ammo box

Notes:

1. "H" means ACE-Q101 qualified



CHARACTERISTICS CURVES

 $(T_A = 25^{\circ}C \text{ unless otherwise noted})$

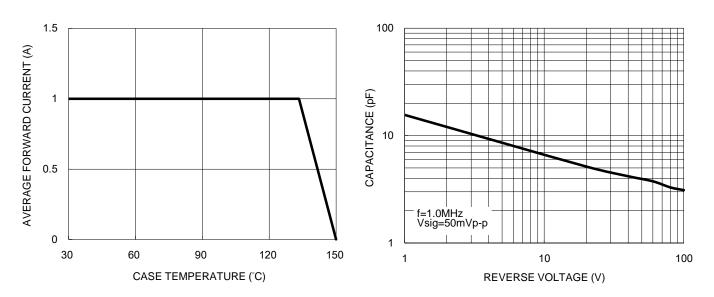
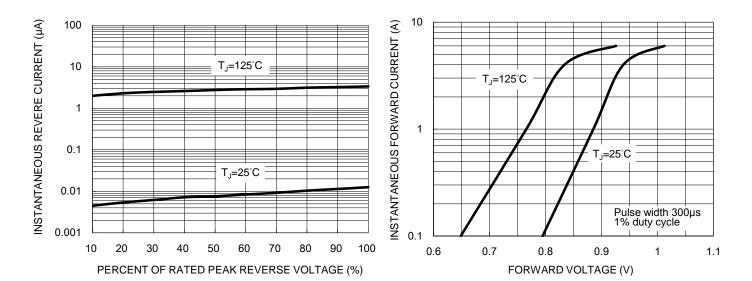


Fig.1 Forward Current Derating Curve

Fig.2 Typical Junction Capacitance

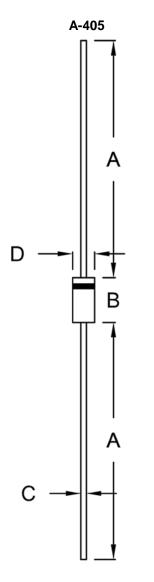
Fig.3 Typical Reverse Characteristics

Fig.4 Typical Forward Characteristics





PACKAGE OUTLINE DIMENSIONS



DIM. Unit		(mm)	Unit (inch)	
DIN.	Min.	Max.	Min.	Max.
А	25.40	-	1.000	-
В	4.20	5.40	0.165	0.213
С	0.53	0.64	0.021	0.025
D	2.00	2.70	0.079	0.106

MARKING DIAGRAM



P/N	= Marking Code
G	= Green Compound
YWW	= Date Code
F	= Factory Code



Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.