

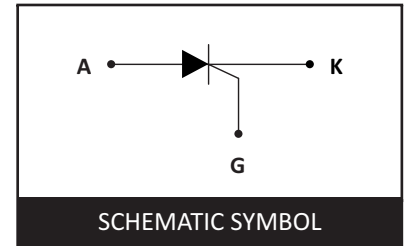
25A SERIES STANDARD SILICON CONTROLLED RECTIFIERS

DESCRIPTION

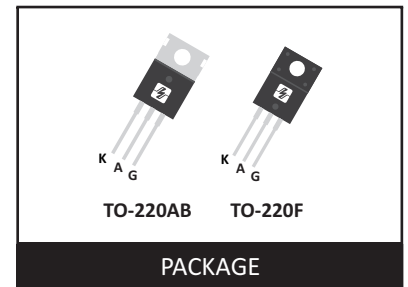
The 25TTS16 SCR is suitable to fit modes of control found in applications such as voltage regulation circuits for motorbikes, over-voltage crowbar protection, motor control circuits in power tools and kitchen aids, inrush current limiting circuits, capacitive discharge ignition. The insulated fullpack package allows a back to back configuration.

FEATURES

- Repetitive Peak Off-State Voltage : 1600V
- R.M.S On-State Current ($I_{T(RMS)} = 25\text{ A}$)
- Low On-State Voltage (1.7V(Max.)@ I_{TM})
- RoHS Compliant



SCHEMATIC SYMBOL



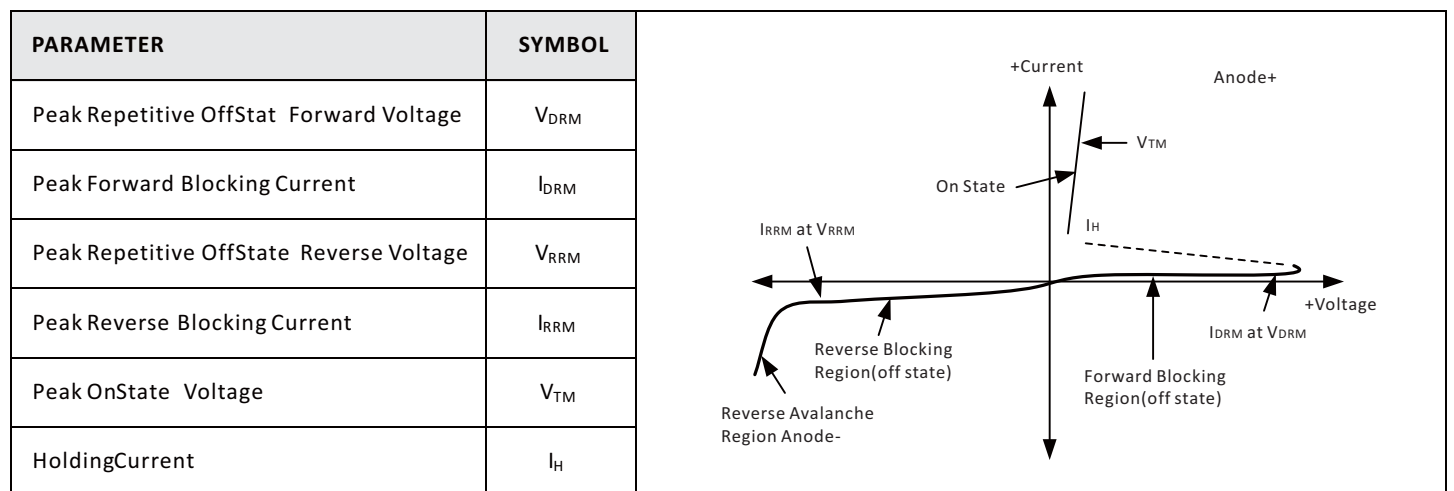
PACKAGE

ABSOLUTE MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED)

Symbol	Parameter		Value	Unit	
V_{DRM}	Repetitive Peak off -State Voltage		1600	V	
V_{RRM}	Repetitive Peak Reverse Voltage		1600	V	
$I_{T(RMS)}$	RMS on-state current	$T_c = 109^\circ\text{C}$	25	A	
$I_{T(AV)}$	Average on-state current		$T_c = 109^\circ\text{C}$	16	A
I_{TSM}	Non repetitive surge peak on-state current	$t_p = 8.3\text{ ms}$	$T_j = 25^\circ\text{C}$	300	A
		$t_p = 10\text{ ms}$		314	
I^2t	I^2t Value for fusing	$t_p = 10\text{ ms}$	$T_j = 25^\circ\text{C}$	450	A^2S
di/dt	Critical rate of rise of on-state current $I_G = 2 \times I_{GT}$, $t_r \leq 100\text{ns}$	$F = 60\text{ Hz}$	$T_j = 125^\circ\text{C}$	50	$\text{A}/\mu\text{s}$
I_{GM}	Peak gate current	$t_p = 20\ \mu\text{s}$	$T_j = 125^\circ\text{C}$	4	A
$P_{G(AV)}$	Average gate power dissipation		$T_j = 125^\circ\text{C}$	1.0	W
T_{stg}	Storage junction temperature range		- 40 to + 150	°C	
T_j	Operating junction temperature range		- 40 to + 125		

ELECTRICAL CHARACTERISTICS (TC = 25 °C UNLESS OTHERWISE NOTED)

Symbol	Test Conditions		Min.	Typ.	Max.	Unit	
I_{GT}	$V_D = 12\text{ V } R_L = 30\text{ohm}$		3	-	25	mA	
V_{GT}			-	-	1.3	V	
V_{GD}	$V_D = V_{DRM} \quad R_{GK} = 1.0\text{ kohm}$	$T_j = 125^\circ\text{C}$	0.2	-	-	V	
I_H	$I_T = 500\text{ mA}$		-	-	40	mA	
I_L	$I_G = 1.2 I_{GT}$		-	-	60	mA	
dv/dt	$V_D = 67\% V_{DRM}$ Gate open	$T_j = 125^\circ\text{C}$	500	-	-	V/ μs	
V_{TM}	$I_{TM} = 30\text{ A } t_p = 380\text{ }\mu\text{s}$	$T_j = 25^\circ\text{C}$	-	-	1.6	V	
I_{DRM}	$V_D = V_{DRM} \quad V_R = V_{RRM}$		$T_j = 25^\circ\text{C}$	-	-	5.0	μA
I_{RRM}			$T_j = 125^\circ\text{C}$	-	-	2.0	mA

VOLTAGE CURRENT CHARACTERISTIC OF SCR


PACKAGE MECHANICAL DATA
TO-220AB

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.56	4.83	0.140	0.190
A1	2.03	2.92	0.080	0.115
b	0.38	1.02	0.015	0.040
b1	1.14	1.78	0.045	0.070
C	0.51	1.40	0.020	0.055
C1	0.36	0.61	0.014	0.024
D	9.65	10.67	0.380	0.420
E	14.22	16.51	0.560	0.650
e	2.54BSC		0.10BSC	
F	2.54	3.05	0.100	0.120
G	3.53	3.90	0.139	0.154
H	12.70	14.73	0.500	0.580
L	5.84	6.86	0.230	0.270
L1	-	6.35	-	0.250

TO-220F

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.40	4.60	0.173	0.181
A1	2.60	2.80	0.102	0.110
A2	2.45	2.55	0.096	0.100
b	0.50	0.75	0.020	0.030
b1	1.10	1.40	0.043	0.055
C	0.50	0.70	0.020	0.028
D	9.70	10.30	0.382	0.406
E	14.70	15.30	0.579	0.602
e	2.54TYP		0.10TYP	
e1	4.88	5.28	0.192	0.208
H	27.40	28.60	1.079	1.126
L	2.50	3.00	0.098	0.118
L1	6.70	6.90	0.264	0.272
L2	3.60	3.80	0.142	0.150

CONTACT US

Headquarters

A Building Caohejing I&E Park
Pujiang Minhang Shanghai
China

Web

<http://www.semiwill.com>

By Telephone

General: 86-21-34637654
Sales: 86-21-34637458
Customer Service: 86-21-34637172

By Email

Sales: sales@semiwill.com
Customer Service: cs@semiwill.com
Technical Support: fae@semiwill.com

By Fax

General: 86-21-34637173
Sales: 86-21-39650654

COPYRIGHT ©SEMIWILL 2009 - This literature is subject to all applicable copyright laws and is not for resale in any manner.

SPECIFICATIONS: SEMIWILL reserves the right to change the electrical and or mechanical characteristics described herein without notice.

DESIGN CHANGES: SEMIWILL reserves the right to discontinue product lines without notice and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance. SEMIWILL assumes no responsibility with respect to the selection or specifications of such products. SEMIWILL makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SEMIWILL assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability without limitation special, consequential or incidental damages.

LIFE SUPPORT POLICY: SEMIWILL products are not authorized for use in life support systems without written consent from the factory.