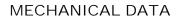


Taiwan Semiconductor

# **Schottky Barrier Rectifier**

## **FEATURES**

- Low forward voltage drop
- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



Case: DO-201AD

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free
Base P/N with prefix "H" on packing code - AEC-Q101 qualified **Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test,

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Weight: 1.3 g (approximately)



**DO-201AD** 





MAXIMUM RATINGS AND ELECTRICAL CHA	RACTERIST	TICS (T <sub>A</sub> =25°C unless	otherwise noted)	
PARAMETER	SYMBOL	SK12H45	SK12H60	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	45	60	V
Maximum RMS voltage	$V_{RMS}$	31	42	V
Maximum DC blocking voltage	$V_{DC}$	45	60	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	12		Α
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	320		А
Maximum instantaneous forward voltage (Note 1) $I_F$ = 12 A	V <sub>F</sub>	0.55	0.70	V
Maximum DC reverse current $@T_J=25 ^{\circ}C$ at rated DC blocking voltage $@T_J=100 ^{\circ}C$	I <sub>R</sub>	0.15 20		mA
Typical thermal resistance	R <sub>θJC</sub> R <sub>θJA</sub>	10 30		°C/W
Junction temperature range - in DC forward mode	e T <sub>J</sub>		<=200	
Storage temperature range	T <sub>STG</sub>	- 50 to +175		оС

Note 1: Pulse test with PW=300µs, 1% duty cycle



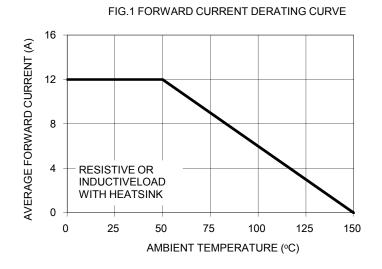
ORDERING INFORMATION					
PART NO.	AEC-Q101	PACKING CODE	GREEN COMPOUND	PACKAGE	PACKING
	QUALIFIED		CODE		
SK12Hxx (Note 1)	Prefix "H"	A0	Suffix "G"	DO-201AD	500 / Ammo box
		R0		DO-201AD	1,250 / 13" Paper reel
		В0		DO-201AD	500 / Bulk packing
		X0		DO-201AD	Forming

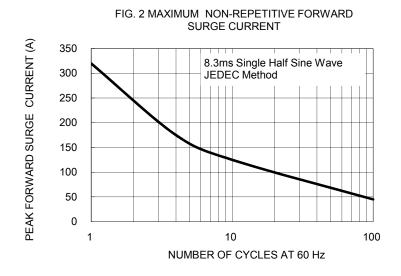
Note 1: "xx" defines voltage from 45V (SK12H45) to 60V (SK12H60)

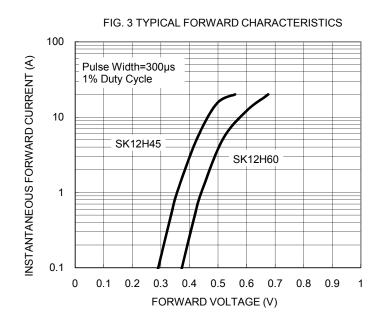
EXAMPLE						
PREFERRED P/N	PART NO.	AEC-Q101	PACKING CODE	GREEN COMPOUND	DESCRIPTION	
		QUALIFIED		CODE	DESCRIPTION	
SK12H45 A0	SK12H45		A0			
SK12H45 A0G	SK12H45		A0	G	Green compound	
SK12H45HA0	SK12H45	Н	A0		AEC-Q101 qualified	

### RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)







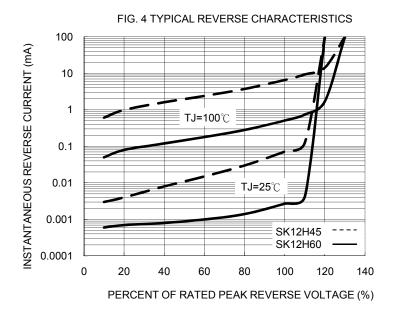




FIG. 5 TYPICAL JUNCTION CAPACITANCE

10000

(Ed)

1000

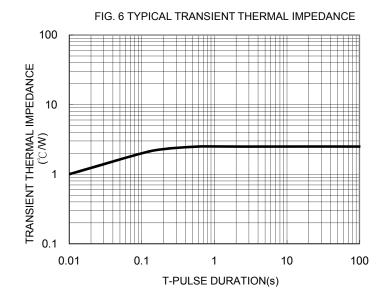
1000

0.1

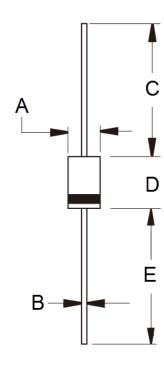
1 10

100

REVERSE VOLTAGE (V)



# PACKAGE OUTLINE DIMENSIONS



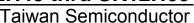
DIM.	Unit	(mm)	Unit (inch)		
	Min	Max	Min	Max	
Α	5.00	5.60	0.197	0.220	
В	1.20	1.30	0.048	0.052	
С	25.40	-	1.000	-	
D	8.50	9.50	0.335	0.375	
Е	25.40	-	1.000	-	

## MARKING DIAGRAM



P/N = Specific Device Code G = Green Compound

YWW = Date Code F = Factory Code





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