



High Efficient Surface Mount Rectifiers

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Low forward voltage drop
- Ultrafast recovery time for high efficiency
- Built-in strain relief
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



DO-214AC (SMA)





Case: DO-214AC (SMA)

MECHANICAL DATA

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - Green compound (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

Polarity: Indicated by cathode band Weight: 0.06 g (approximately)

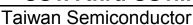
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)									
PARAMETER	SYMBOL	US	US	US	US	US	US	US	UNIT
FARAIVILILIK	STWIBOL	1A	1B	1D	1G	1J	1K	1M	Civil
Maximum repetitive peak reverse voltage	V_{RRM}	50 100 200 400		600	800	1000	V		
Maximum RMS voltage	V_{RMS}	35 70 140 280 420 560 70		700	V				
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	1			Α				
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30			Α				
Maximum instantaneous forward voltage (Note 1) @ 1 A	V _F	1.0 1.7			V				
Maximum reverse current @ rated VR T_J =25 $^{\circ}$ C T_J =125 $^{\circ}$ C	I _R	5 150		μΑ					
Maximum reverse recovery time (Note 2)	Trr	50 75			ns				
Typical junction capacitance (Note 3)	Cj	15 10			pF				
Typical thermal resistance	$R_{ heta jL} \ R_{ heta jA}$	27 75		°C/W					
Operating junction temperature range	TJ	- 55 to +150			оС				
Storage temperature range	T _{STG}	- 55 to +150			оС				

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

Note 2: Reverse Recovery Test Conditions: I_F =0.5A, I_R =1.0A, I_{RR} =0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

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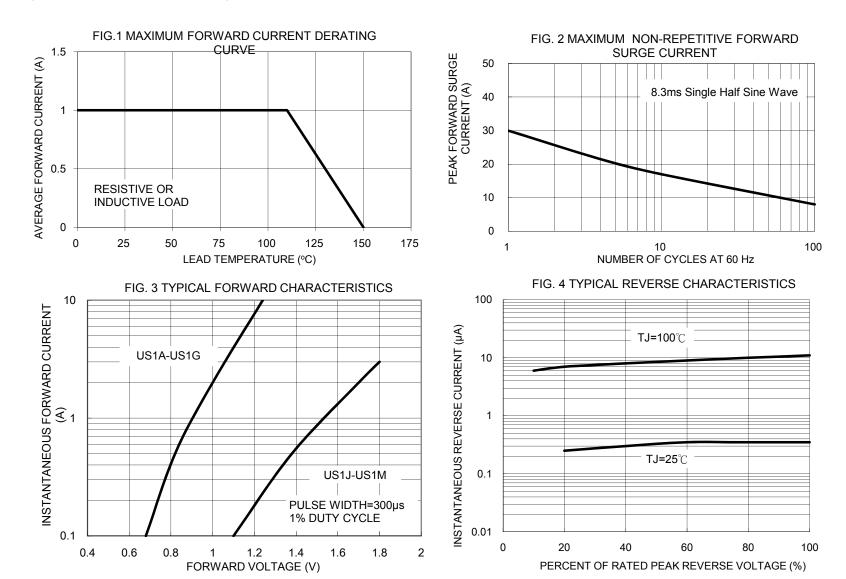
ORDERING	INFORMATION				
PART NO.	AEC-Q101	PACKING CODE	GREEN COMPOUND	PACKAGE	PACKING
	QUALIFIED		CODE		
US1x (Note 1) N/A		R3		SMA	1,800 / 7" Plastic reel
	R2		SMA	7,500 / 13" Paper reel	
	M2		SMA	7,500 / 13" Plastic reel	
	FIEIIX II	F3	Cuffix "C"	Folded SMA	1,800 / 7" Plastic reel
		F2	Suffix "G"	Folded SMA	7,500 / 13" Paper reel
		F4		Folded SMA	7,500 / 13" Plastic reel
	NI/A	E3		Clip SMA	1,800 / 7" Plastic reel
	IN/A	E2		Clip SMA	7,500 / 13" Plastic reel

Note 1: "x" defines voltage from 50V (US1A) to 1000V (US1M)

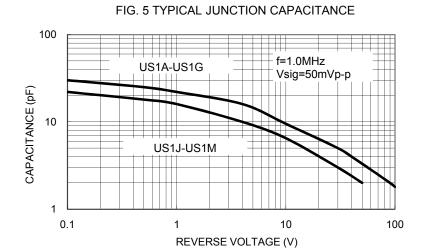
EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
US1M R3	US1M		R3		
US1M R3G	US1M		R3	G	Green compound
US1MHR3	US1M	Н	R3		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)







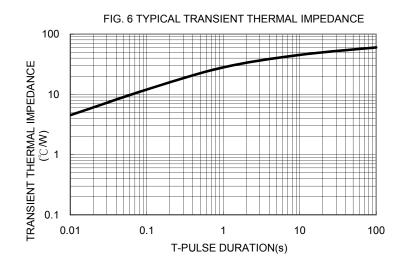
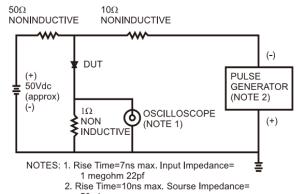
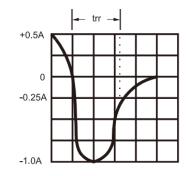


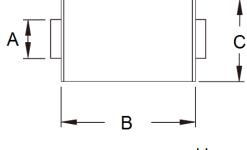
FIG.7- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

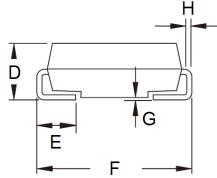


50 ohms



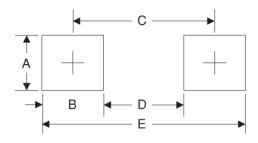
PACKAGE OUTLINE DIMENSIONS





DIM.	Unit (mm)		Unit (inch)		
DIIVI.	Min	Max	Min	Max	
Α	1.27	1.58	0.050	0.062	
В	4.06	4.60	0.160	0.181	
С	2.29	2.83	0.090	0.111	
D	1.99	2.50	0.078	0.098	
Е	0.90	1.41	0.035	0.056	
F	4.95	5.33	0.195	0.210	
G	0.10	0.20	0.004	0.008	
Н	0.15	0.31	0.006	0.012	

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
Α	1.68	0.066
В	1.52	0.060
С	3.93	0.155
D	2.41	0.095
Е	5.45	0.215

MARKING DIAGRAM



P/N = Specific Device Code G = Green Compound

YW = Date Code F = Factory Code





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