

High Efficient Surface Mount Rectifiers

FEATURES

- Glass passivated junction chip
- Ideal for automated placement
- Low profile package
- Low power loss, high efficiency
- Fast switching for high efficiency
- 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







MECHANICAL DATA

Case: Sub SMA Sub SMA

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:** 0.019 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°ℂ unless otherwise noted)										
DADAMETED	SYMBOL	HS	HS	HS	HS	HS	HS	HS	HS	UNIT
PARAMETER		1AL	1BL	1DL	1FL	1GL	1JL	1KL	1ML	
Marking code		HAL	HBL	HDL	HFL	HGL	HJL	HKL	HML	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	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}				3	80				Α
Maximum instantaneous forward voltage (Note 1) @ 1 A	V _F	0.95 1.3		1.7		V				
Maximum reverse current @ rated VR T_J =25 $^{\circ}$ C T_J =125 $^{\circ}$ C	I _R	5 150		μA						
Typical junction capacitance (Note 2)	Cj			20				15		pF
Maximum reverse recovery time (Note 3)	Trr			50				75		ns
Typical thermal resistance	$R_{\theta jA}$	100				°C/W				
Operating junction temperature range	T _J	- 55 to +150		оС						
Storage temperature range	T _{STG}	- 55 to +150				оС				
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Note 1: Pulse test with PW=300 μ s, 1% duty cycle

Note 2: Measured at 1 MHz and Applied VR=4.0 Volts.

Note 3: Reverse Recovery Test Conditions: I_F =0.5A, I_R =1.0A, I_{RR} =0.25A





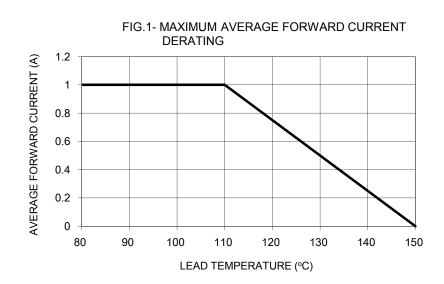
ORDERING	ORDERING INFORMATION					
PART NO.	AEC-Q101	PACKING CODE	GREEN COMPOUND	PACKAGE	PACKING	
	QUALIFIED		CODE			
		RU	Suffix "G"	Sub SMA	1,800 / 7" Plastic reel (8mm tape)	
		RV		Sub SMA	3,000 / 7" Plastic reel (8mm tape)	
		RT		Sub SMA	7,500 / 13" Paper reel (8mm tape)	
		MT		Sub SMA	7,500 / 13" Plastic reel (8mm tape)	
		RQ		Sub SMA	10,000 / 13" Paper reel (8mm tape)	
HS1xL	Prefix "H"	MQ		Sub SMA	10,000 / 13" Plastic reel (8mm tape)	
(Note 1)		R3		Sub SMA	1,800 / 7" Plastic reel (12mm tape)	
		RF		Sub SMA	3,000 / 7" Plastic reel (12mm tape)	
		R2		Sub SMA	7,500 / 13" Paper reel (12mm tape)	
		M2		Sub SMA	7,500 / 13" Plastic reel (12mm tape)	
		RH		Sub SMA	10,000 / 13" Paper reel (12mm tape)	
		MH]	Sub SMA	10,000 / 13" Plastic reel (12mm tape)	

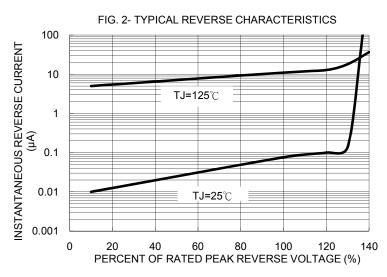
Note 1: "x" defines voltage from 50V (HS1AL) to 1000V (HS1ML)

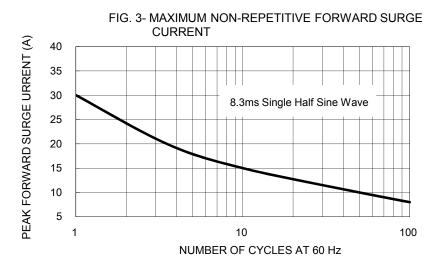
EXAMPLE						
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION	
HS1JL RU	HS1JL		RU			
HS1JL RUG	HS1JL		RU	G	Green compound	
HS1JLHRU	HS1JL	Н	RU		AEC-Q101 qualified	

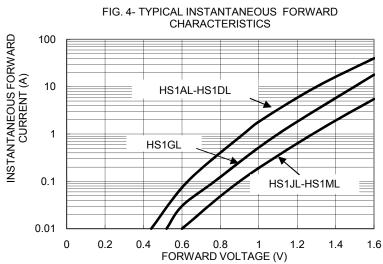
RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)











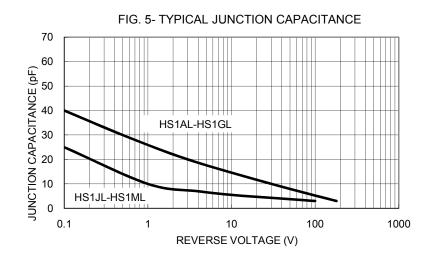
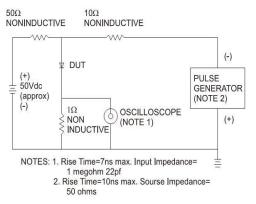
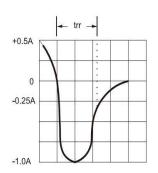
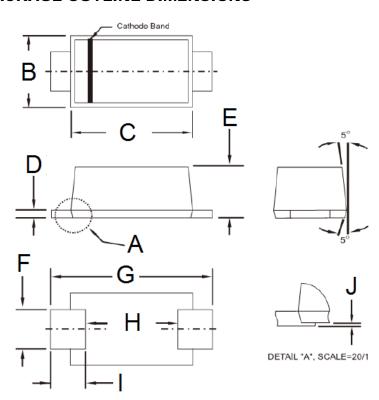


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



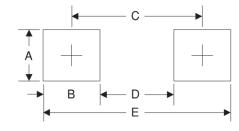


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit	(mm)	Unit (inch)			
DIIVI.	Min	Max	Min	Max		
В	1.70	1.90	0.067	0.075		
С	2.70	2.90	0.106	0.114		
D	0.16	0.30	0.006	0.012		
Е	1.23	1.43	0.048	0.056		
F	0.80	1.20	0.031	0.047		
G	3.40	3.80	0.134	0.150		
Н	2.45	2.60	0.096	0.102		
I	0.35	0.85	0.014	0.033		
J	0.00	0.10	0.000	0.004		

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
Α	1.4	0.055
В	1.2	0.047
С	3.1	0.122
D	1.9	0.075
E	4.3	0.169

MARKING DIAGRAM



P/N = Marking Code G = Green Compound

YW = Date Code

F = Factory Code

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