Surface Mount Glass Passivated High Efficiency Rectifier Reverse Voltage 1200V Forward Current 1A

Features

- Glass passivated junction chip
- Low forward voltage drop
- Built-in strain relief, ideal for automated placement
- ◆ Fast switching for high efficiency
- High temperature soldering: 250°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



Package: SMA (DO-214AC)

Mechanical Data

• Case: Molded plastic

Terminals: Solder plated

Polarity: Indicated by cathode end

• Weight: 0.002 ounce, 0.064gram

Maximum Ratings (T_A = 25°C unless otherwise noted)

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Parameter	Symbols	HS10	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1200	V
Maximum RMS Voltage	V _{RMS}	840	V
Maximum DC Blocking Voltage	V _{DC}	1200	V
Maximum Average Forward Rectified Current (see fig. 1)	I _{F(AV)}	1.0	А
Peak Forward Surge Current 8.3ms Single Half Sine- Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30	А
Typical Thermal Resistance per Case (NOTE 1)	R _{eJC}	23	°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	- 55 to + 150	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbols	HS10	Unit
Maximum Instantaneous Forward Voltage	I _F =1.0A	V _F	1.7	V
Maximum DC Reverse Current At Rated DC Blocking Voltage	T _A =25°C	I _R	5.0	uA
	T _A =100°C		100	
Typical Reverse Recovery Time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	75	uS
Typical Junction Capacitance	4.0V, 1 MHz	CJ	15	pF

Notes: 1. Thermal resistance form junction to ambient and from junction to case P.C.B. mounted on 0.2×0.2"(5.0×5.0mm) copper pad areas.



HS10 Surface Mount Glass Passivated High Efficiency Rectifier

Ratings and Characteristics Curves

NUMBER OF CYCLES AT 60Hz

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

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE 10Ω NONINDUCTIVE 50Ω NONINDUCTIVE 3 Single Phase Half Wave 60Hz FORWARD CURRENT. 2.5 DUT Resistive or 2.0 PULSE 0 Inductive Load GENERATOR (approx) 1.5 (NOTE 2) -0.25A OSCILLOS (NOTE 1) (+) AVERAGE 50 75 1 megchm 22pf 2. Rise Time=10ns max. Sourse Impedance= SET TIME BASE FOR LEAD TEMPERATURE. (°C) FIG.4- TYPICAL INSTANTANEOUS FIG.3- TYPICAL REVERSE CHARACTERISTICS FORWARD CHARACTERISTICS 3 INSTANTAMEDUS FORWARD CURRENT. Tj=100°C INSTANTANEOUS REVERSE CURRENT. Tj=25°C 0.0 FORWARD VOLTAGE. (V) PERCENT OF RATED PEAK REVERSE VOLTAGE. (%) FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE FIG.6- TYPICAL JUNCTION CAPACITANCE 60 CURRENT. (A) 50 JUNCTION CAPACITANCE (pF) 40 PEAK FORWARD SURGE 30 SINGLE SINE-WAVE 20 JEDEC METHOD 10 0 10 100

REVERSE VOLTAGE. (V)



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Package Outline Dimensions

in inches (millimeters)

Package: SMA (DO-214AC)



