

Features

- Glass passivated junction chip
- For surface mounted application
- Low forward voltage drop
- Low profile package
- Built-in stain relief, ideal for automatic placement
- Fast switching for high efficiency
- High temperature soldering: 260°C/10 seconds at terminals
- Plastic material used carries underwriters laboratory classification 94V-0



DO-214AC (SMA)

Mechanical Data

- Cases: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Weight: 0.064 gram typical

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M	Unit
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 See Fig.1	I _(AV)	1.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	30								A
Maximum Instantaneous Forward Voltage @ 1.0A	V _F	1.0				1.3	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	5.0								uA
	T _A =125°C	100								
Maximum Reverse Recovery Time ¹	t _{rr}	50					75			nS
Typical Junction Capacitance ²	C _J	6.5								pF
Operating Junction Temperature Range	T _J	-55 to +150								°C
Storage Temperature Range	T _{STG}	-55 to +150								°C

Notes:

1. Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V

Thermal Characteristics

Parameter	Symbol	HS1A	HS1B	HS1D	HS1F	HS1G	HS1J	HS1K	HS1M	Unit
Typical Thermal Resistance ³	R _{θJA}	72								°C/W
	R _{θJC}	33								
	R _{θJL}	7								

Notes:

3. The thermal resistance from junction to ambient, case and lead, mounted on FR-4 P.C.B with 5×5mm copper pads.

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

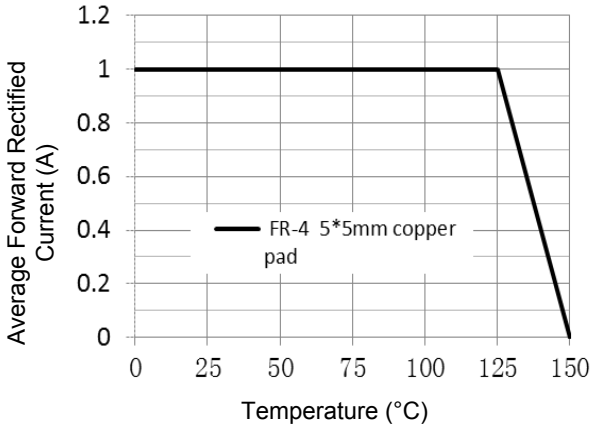


Figure 1. Forward Current Derating Curve

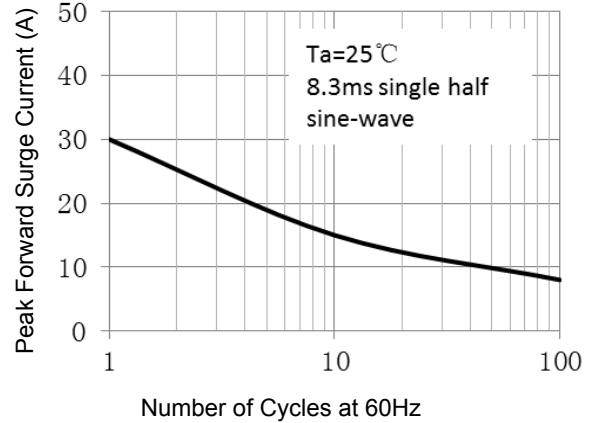


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

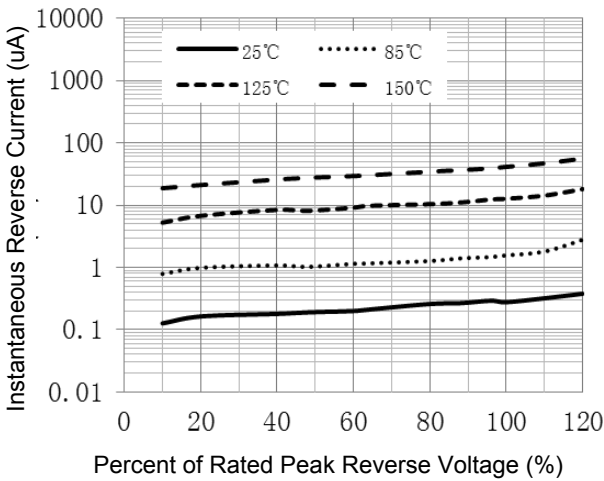


Figure 3. Typical Reverse Characteristics

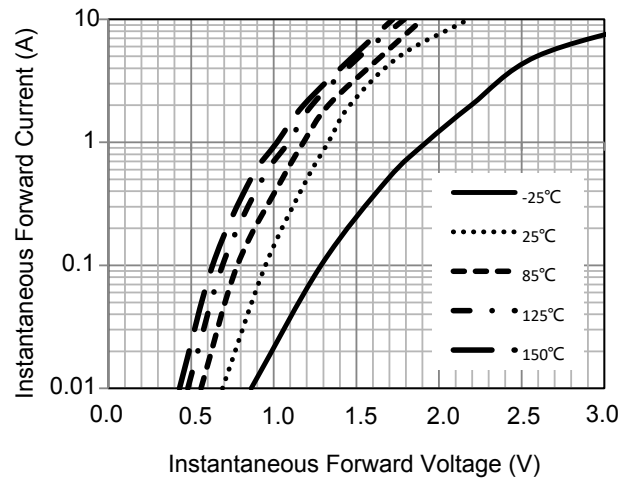


Figure 4. Typical Forward Characteristics

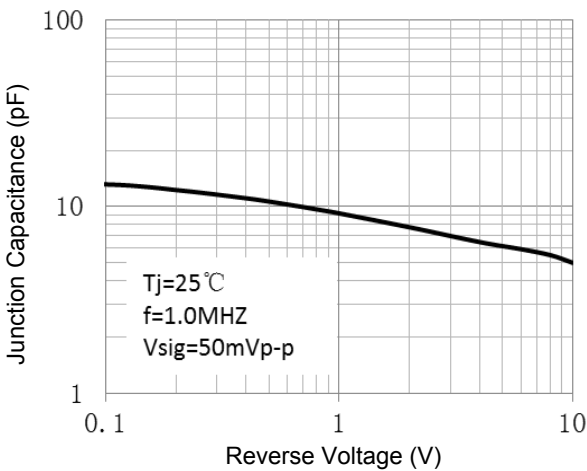
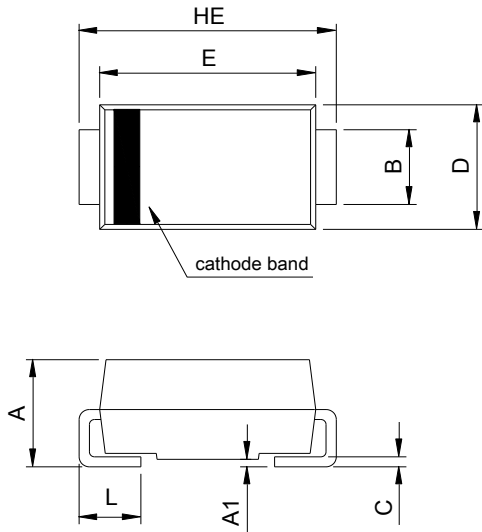


Figure 5. Typical Junction Capacitance

HS1A thru HS1M

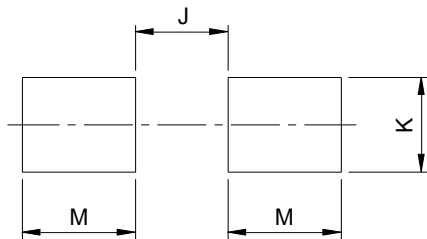
Ultrafast Recovery Rectifiers
 Reverse Voltage 50V to 1000V Forward Current 1.0 A

Package Outline Dimensions DO-214AC (SMA)



DIM	SMA (DO-214AC)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.30	0.075	0.091
A1	0.00	0.20	0.000	0.008
B	1.25	1.65	0.049	0.065
C	0.15	0.31	0.006	0.012
D	2.35	2.90	0.093	0.114
E	3.99	4.60	0.157	0.181
HE	4.80	5.30	0.189	0.209
L	0.76	1.52	0.030	0.060

Recommended Pad Layout



DIM	Recommended Pad Layout (Reference ONLY)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.20	-	0.087
K	1.72	-	0.068	-
M	2.00	-	0.079	-