

HS2AA thru HS2MA

Ultrafast Recovery Rectifiers
 Reverse Voltage 50V-1000V Forward Current 1.5 A

Features

- Glass passivated junction chip
- For surface mount applications
- Low forward voltage drop
- Low profile package
- Built-in stain relief, ideal for automated placement
- Fast switching for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Weight:0.002 ounce,0.064 gram



Package: SMA (DO-214AC)



Applications

For use of general purpose rectifications in lighting, cellular phones, portable devices, power supplies and other consumer applications.

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

Parameter	Symbol	HS2AA	HS2BA	HS2DA	HS2FA	HS2GA	HS2JA	HS2KA	HS2MA	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 Output Rectified Current	I _{F(AV)}	1.5								A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I _{FSM}	50								A
Rating for Fusing (t<8.3ms)	I ² t	10								A ² sec
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	Symbol	HS2AA	HS2BA	HS2DA	HS2FA	HS2GA	HS2JA	HS2KA	HS2MA	Unit
Maximum Instantaneous Forward Voltage	I _F =1.5A	V _F	1.0				1.3	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C T _A =125°C	I _R	5.0				100				μA
Maximum Reverse Recovery Time	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	t _{rr}	50				75				ns
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	50				30				pF

Thermal Characteristics

Parameter	Symbol	HS2AA	HS2BA	HS2DA	HS2FA	HS2GA	HS2JA	HS2KA	HS2MA	Unit
Typical thermal resistance ⁽¹⁾	R _{θJA}	67								°C/W
	R _{θJC}	27								
	R _{θJI}	7								

Notes:1. The thermal resistance from junction to ambient, case or mount, mounted on P.C.B with 8×8mm copper pads, 2 OZ, FR4 PCB

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

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

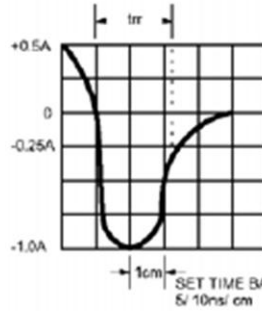
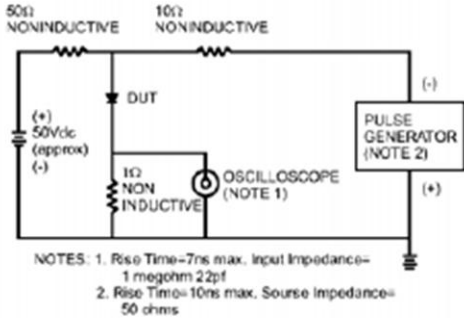


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

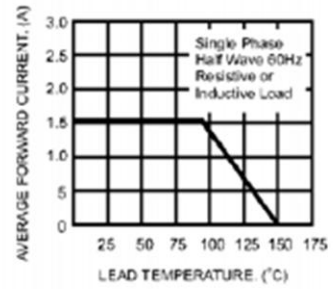


FIG.3- TYPICAL REVERSE CHARACTERISTICS

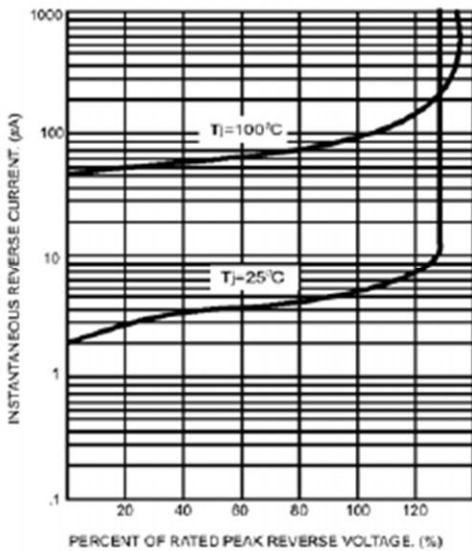


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

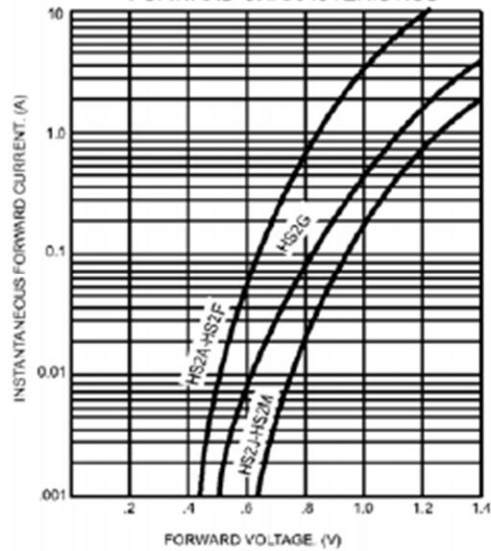


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

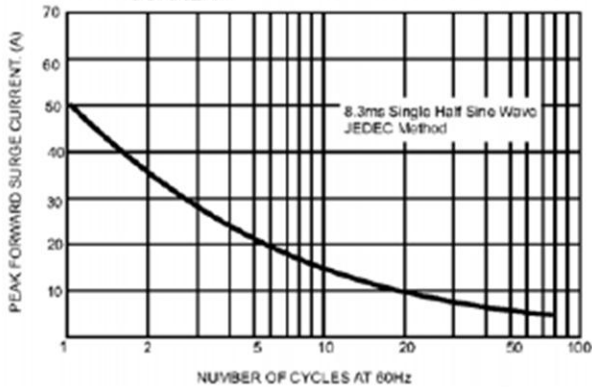
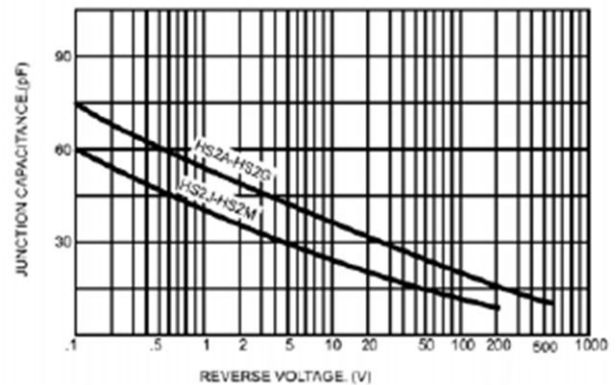
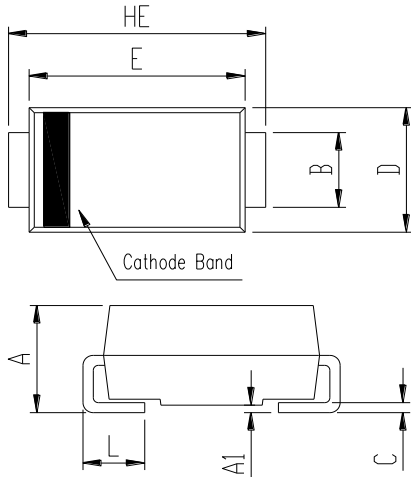


FIG.6- TYPICAL JUNCTION CAPACITANCE

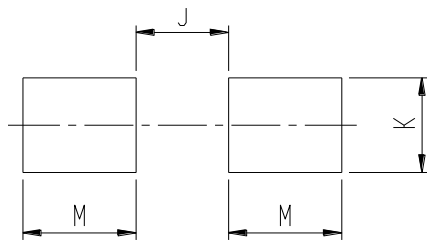


Package Outline Dimensions DO-214AC (SMA)



SMA (DO-214AC)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.25	0.075	0.089
A1	0.00	0.20	0.000	0.008
B	1.27	1.63	0.050	0.064
C	0.15	0.31	0.006	0.012
D	2.40	2.65	0.094	0.104
E	4.00	4.60	0.157	0.181
HE	4.80	5.20	0.189	0.205
L	0.80	1.50	0.031	0.059

Recommended Pad Layout



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