

FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Super fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

TYPICAL APPLICATIONS

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

MECHANICAL DATA

- **Package:** DO-214AC (SMA)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

MAXIMUM RATINGS (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HS2AA	HS2BA	HS2DA	HS2FA	HS2GA	HS2JA	HS2KA	HS2MA
Device marking code			HS2AA	HS2BA	HS2DA	HS2FA	HS2GA	HS2JA	HS2KA	HS2MA
Maximum Repetitive peak reverse voltage	VRRM	V	50	100	200	300	400	600	800	1000
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	IO	A	2.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	IFSM	A	50							
Storage temperature	Tstg	°C	-55~+150							
Junction temperature	Tj	°C	-55 ~ +150							

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	HS2AA	HS2BA	HS2DA	HS2FA	HS2GA	HS2JA	HS2KA	HS2MA
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=2.0A	1.0			1.3		1.7		
Maximum reverse recovery time	T _{RR}	ns	IF=0.5A, IR=1.0A, IR=0.25A	50					75		
Maximum DC reverse current at rated DC blocking voltage per diode@ VRM=VRRM	IRRM	µA	Ta=25°C	5							
			Ta=125°C	100							

THERMAL CHARACTERISTICS (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	HS2AA	HS2BA	HS2DA	HS2FA	HS2GA	HS2JA	HS2KA	HS2MA
Typical Thermal Resistance	RθJ-A	°C/W	75 ⁽¹⁾							
	RθJ-L	°C/W	25 ⁽¹⁾							
	RθJ-C	°C/W	20 ⁽¹⁾							

Note
(1) Thermal resistance from junction to ambient (and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

CHARACTERISTICS (TYPICAL)

FIG.1: Io-TL Cure

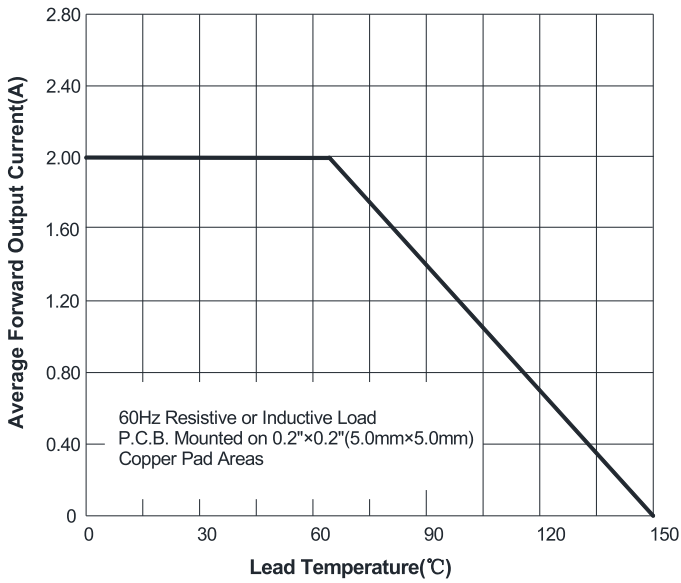


FIG.2: Forward Surge Current Capability

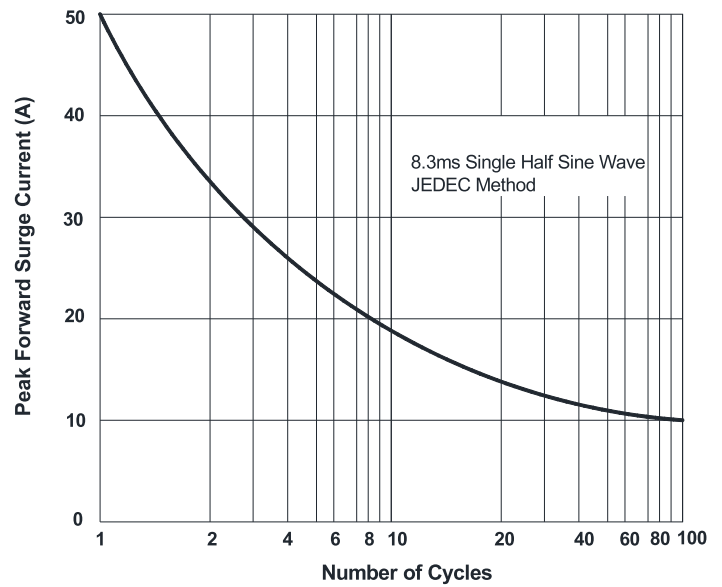


FIG.3: Typical Forward Characteristics

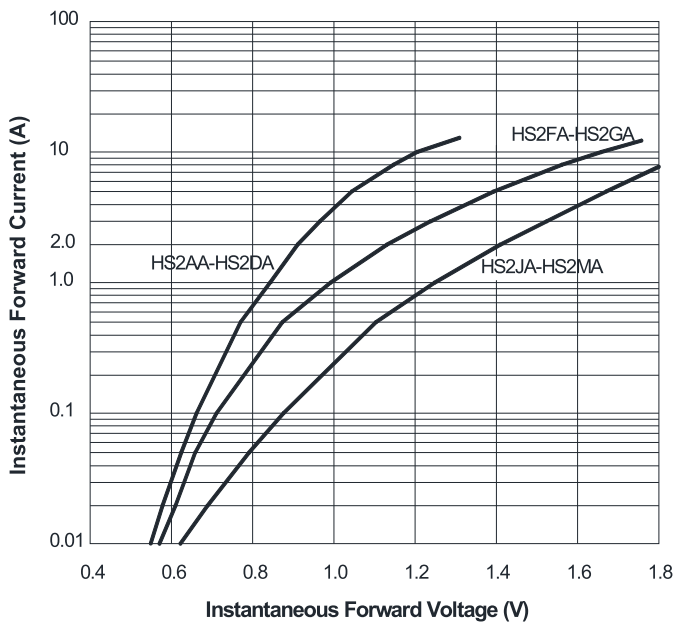


FIG.4: Typical Reverse Characteristics

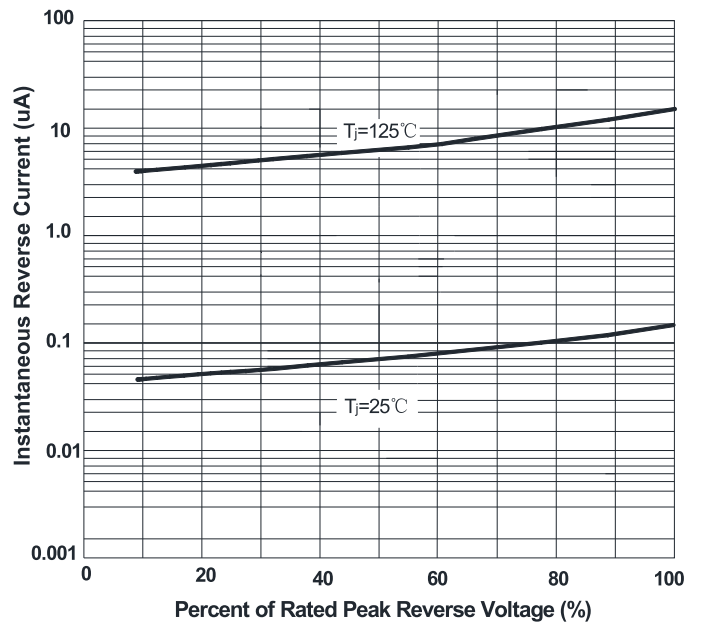
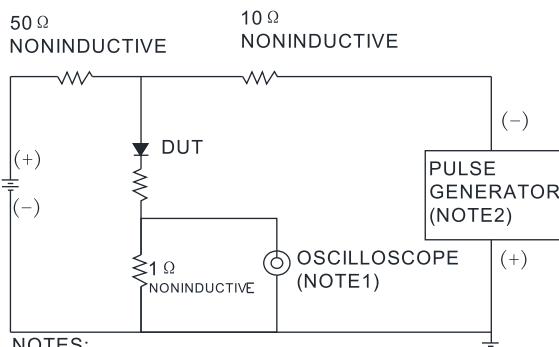
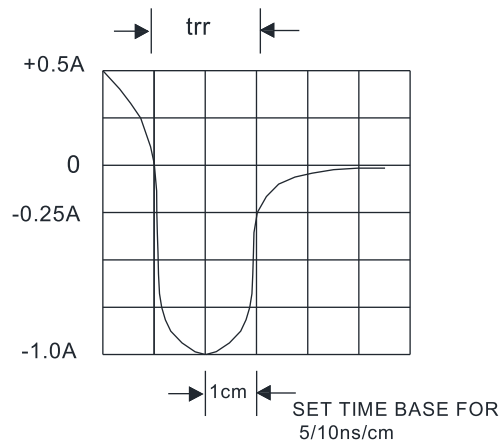


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



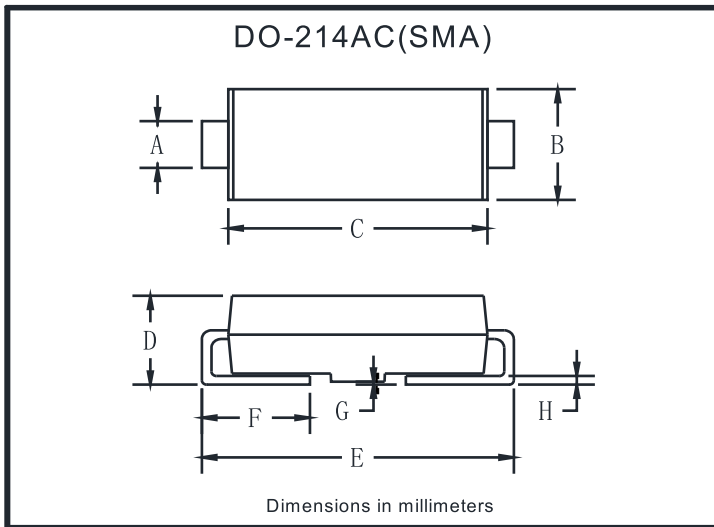
NOTES:
1. Rise Time=7ns max. Input Impedance=1MΩ 22pf
2. Rise Time=10ns max. Source Impedance=50Ω



ORDERING INFORMATION (EXAMPLE)

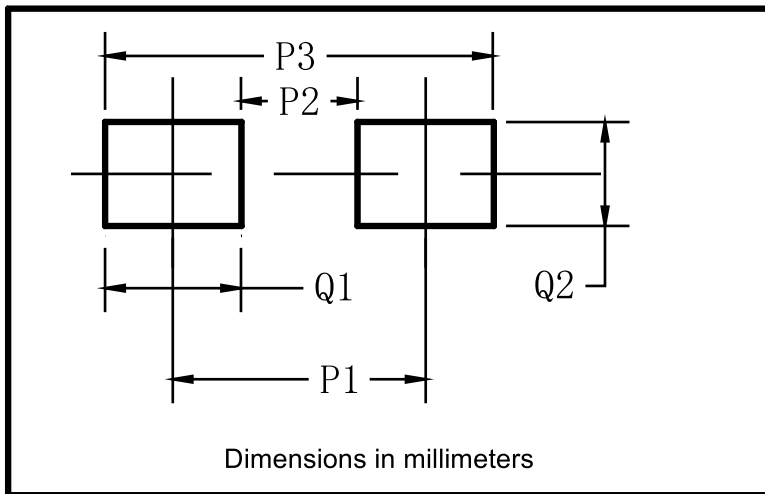
PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
HS2AA-HS2MA	Omit for Standard	Approximate 0.059	5000	10000	80000	13" reel
HS2AA-HS2MA	X07	Approximate 0.059	1800	7200	57600	7" reel

OUTLINE DIMENSIONS



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.25	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31

SUGGESTED PAD LAYOUT



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70