

N5GSP-M84FDS-U350SA

FAST RECOVERY RECTIFIER GPP CHIP



VOLTAGE: 1000 Volts

CURRENT: 3 Amperes

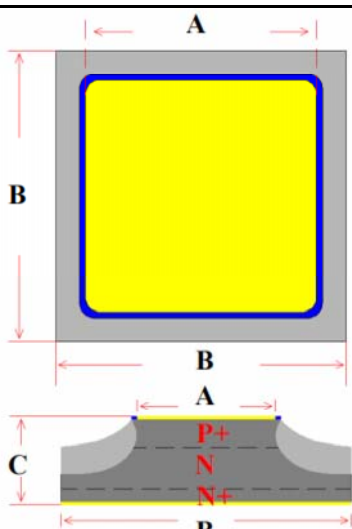
FEATURES

- Glass Passivated Chip Junction
- Super Fast Recovery Time For High Efficiency
- Low Leakage Current For High Reliability
- High Forward Surge Capability For High Reliability

TYPICAL APPLICATIONS

- PD Fast Charger
- Switch Power Supply
- LED Driver
- Audio Equipment

Mechanical Data

Chip Drawing	Chip Dimensions				
	Symbol	Vale	Tolerance	Unit	
	Chip Size	A	2.108	±0.050	mm
	Pad Size	B	1.428	±0.020	mm
	Chip Thickness	C	0.255	±0.050	mm
	wafer Size		5 127	±0.10 ±2.54	in mm
Chip Surface Coating					
Top Metal	Ni-Ni-Au				
Back Metal	Ni-Ni-Au				
Passivation	SIPOS+GLASS+LTO				

Maximum Ratings (Ta=25°C Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	N5GSP-M84FDS-U350SA	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	1000	V
Maximum Average Forward Rectified Current	@TC= 100 °C	$I_{F(AV)}$	3	A
Peak Forward Surge Current	8.3ms Single Half Sine-wave Superimposed On Rate Load	I_{FSM}	80	A

Electrical Characteristics (Ta=25°C Unless Otherwise Specified)

Parameter	Test Conditions		Symbol	N5GSP-M84FDS-U350SA			Unit
				Min.	Typ.	Max.	
Instaneous Forward Voltage Per Diode (note1)	Ta=25°C	$I_F = 3.0 A$	V_F	--	0.93	0.98	V
	Ta=125°C			--	0.81	0.86	
Maximum DC Reverse Current At Rated DC Blocking Voltage (Note 1)	Ta=25°C	$V_R = V_{RRM}$	I_{RRM}	--	0.10	1.00	uA
	Ta=125°C	$V_R = 80\% * V_{RRM}$		--	50.00	100.00	
Maximum Reverse Recovery Time	$I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$		T_{RR}	--	400.00	500.00	nS

Thermal Characteristics (Ta=25°C Unless Otherwise Specified)

Parameter	Symbol	N5GSP-M84FDS-U350SA	Unit
Operating Junction Temperature Range	T_J	-55 to 150	°C
Storage Temperature Range	T_{STD}	-55 to 150	

Notes: 1.Pulse Test: 300 Us Pulse Width,1% Duty Cycle

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Typical Characteristics Curves

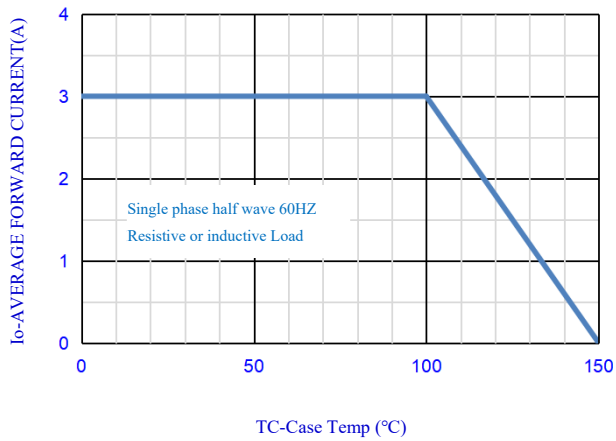


Fig.1-FORWARD CURRENT DERATING CURVE

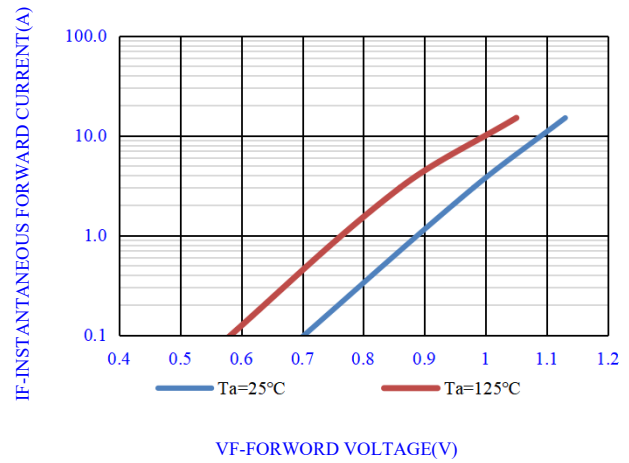


Fig.2- TYPICAL INSTANTANEOUS FORWARD

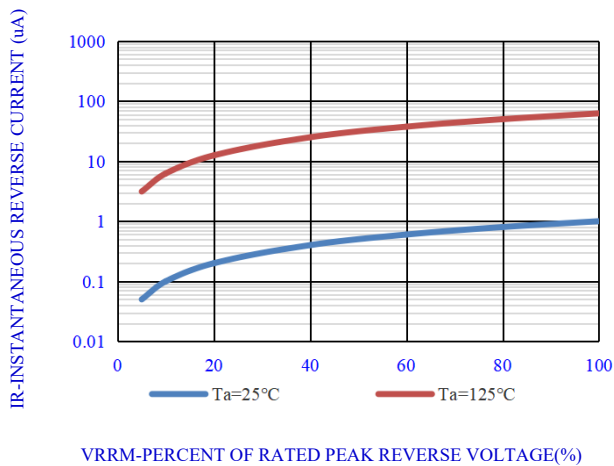


Fig.3- TYPICAL REVERSE CHARACTERISTICS

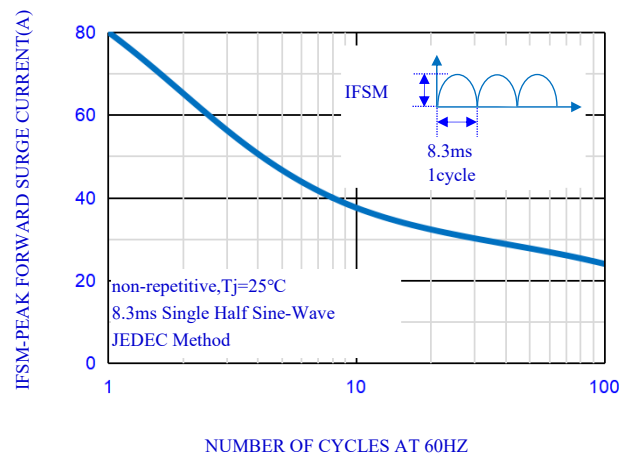


Fig.4-MAX. NON-REPETITIVE SURGE CURRENT

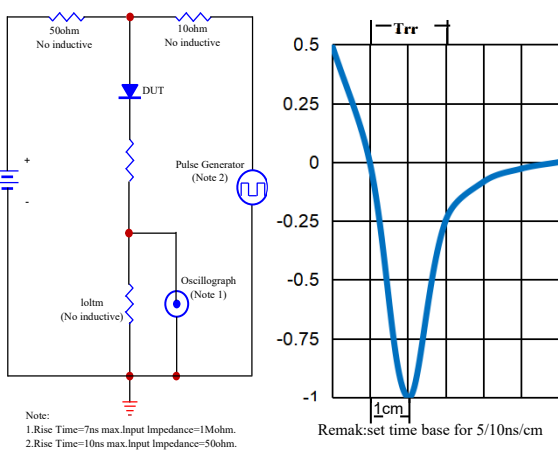


Fig.5-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT

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