Glass Passivated Sintered Fast Recovery Rectifier COMCHIP
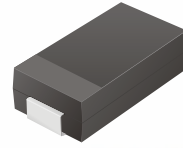
www.comchip.com.tw

CFPA10MM

Reverse Voltage: 2000 Volts
Forward Current: 1.0 Amp

Features

- Glass passivated cavity-free junction
- Ideal for surface mount automotive application
- Plastic package has Underwriters Lab. flammability classification 94V-0
- Built-in strain relief
- High temperature soldering guaranteed: 350 degree C/10sec, at terminals
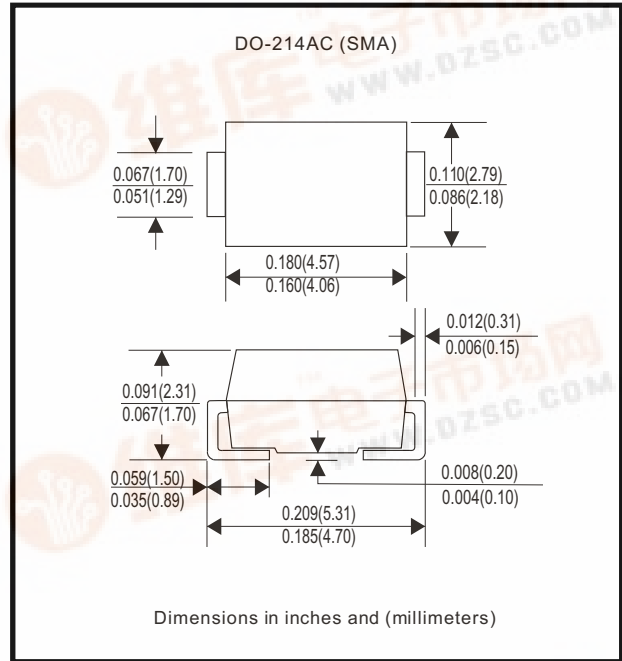- For use in high frequency rectifier circuits

Mechanical data

Case: JEDEC DO-214AC molded plastic
Terminals: solderable per   MIL-STD-750, method 2026
Polarity: Color band denotes cathode end
Weight:0.064 gram

DO-214AC (SMA)

0.067(1.70) / 0.051(1.29)
0.110(2.79) / 0.086(2.18)
0.180(4.57) / 0.160(4.06)
0.012(0.31) / 0.006(0.15)
0.091(2.31) / 0.067(1.70)
0.059(1.50) / 0.035(0.89)
0.008(0.20) / 0.004(0.10)
0.209(5.31) / 0.185(4.70)

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characterics

Parameter	Symbol	CFPA10MM	Unit
Max.RepetitivePeak Reverse Voltage	V_{RRM}	2000	V
Max. DC Blocking Voltage	V_{DC}	2000	V
Max. RMS Voltage	V_{RMS}	1400	V
Peak Surge Forward Current 8.3ms single half sine-wave Sine-wave superimposed on Rate load (JEDEC)	I_{FSM}	20	A
Max. AverageForward Current	I_o	1.0	A
Max. Instantaneous Forward Current at 1.0 A	V_F	1.8	V
Reverse Recovery Time	T_{rr}	500	nS
Max. DC Reverse Current at rated DC Blocking Voltage Ta=25°C Ta=125°C	I_R	5 50	uA
Max. Thermal Resistance (Note 1)	$R\theta_{JA}$	65	^{o}C/W
Operating Junction temperature	T_j	-55 to +175	^{o}C
Storage Temperature	T_{STG}	-55 to +175	^{o}C

Note 1: Thermal resistance from junction to ambient at 0.375"(9.5 mm) lead lengths, P.C. B. Mounted.

RATING AND CHARACTERISTIC CURVES (CFPA10MM)
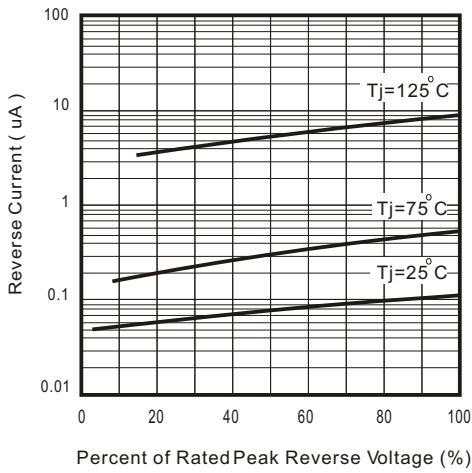
Fig. 1 - Reverse Characteristics

Reverse Current (uA)
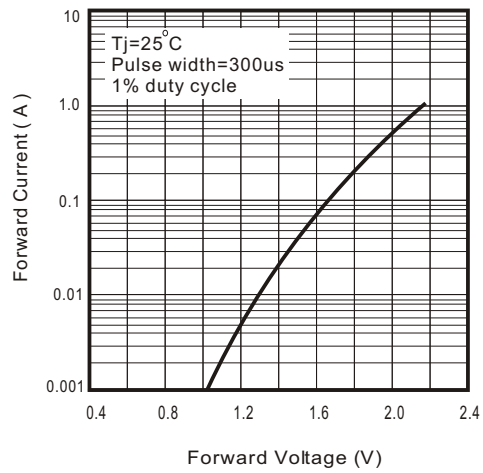
Tj=125°C

Tj=75°C

Tj=25°C

Percent of Rated Peak Reverse Voltage (%)

Fig.2 - Forward Characteristics

Forward Current (A)

Tj=25°C
Pulse width=300us
1% duty cycle

Forward Voltage (V)

Fig. 3 - Junction Capacitance

Junction Capacitance (pF)

Tj=25°C

Reverse Voltage (V)
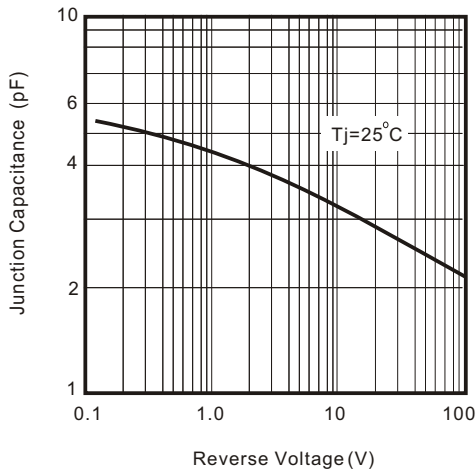
Fig. 4 - Non Repetitive Forward Surge Current

Peak Surge Forward Current (A)

8.3mS Single Half Sine Wave JEDEC methode

Tj=25°C

Number of Cycles at 60Hz
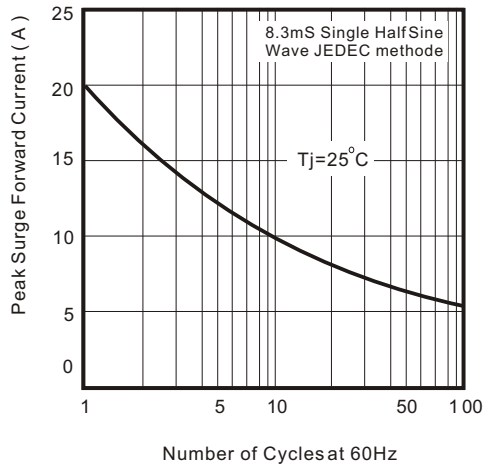
Fig. 5 - Test Circuit Diagram and Reverse Recovery Time Characteristics

50 NONINDUCTIVE

10 NONINDUCTIVE

(+)

25Vdc (approx.)

(−)

D.U.T.

1 NON-INDUCTIVE

OSCILLISCOPE (NOTE 1)

(−)

PULSE GENERATOR (NOTE 2)

(+)
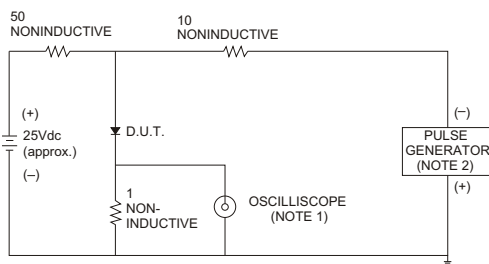
NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.
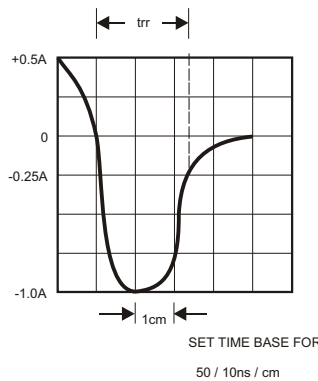
trr

+0.5A

0

-0.25A

-1.0A

1cm

SET TIME BASE FOR

50 / 10ns / cm

Fig. 6 - Current Derating Curve

Average Forward Current (A)

Single Phase
Half Wave 60Hz

Ambient Temperature (°C)