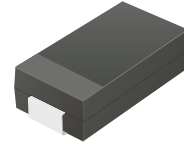


## CGRA4001-HF Thru. CGRA4007-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device  
Halogen Free

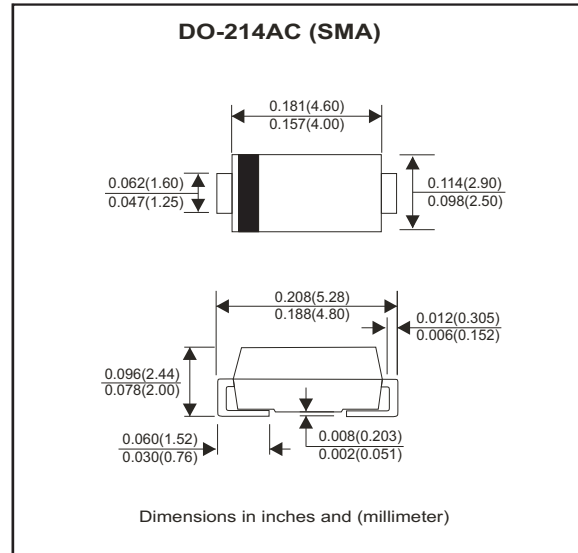


### Features

- Ideal for surface mount applications.
- Low profile package.
- Built in strain relief.
- Easy pick and place.
- Plastic package has Underwriters Laboratory flammability classification 94V-0.
- Low forward drop.
- Glass passivated dip junction.
- High temperature soldering: 260°C/10 seconds at terminals

### Mechanical data

- Case: JEDEC DO-214AC, molded plastic.
- Terminals: Solder plated, Solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.064 grams( Approx.).



### Circuit diagram



### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	CGRA 4001-HF	CGRA 4002-HF	CGRA 4003-HF	CGRA 4004-HF	CGRA 4005-HF	CGRA 4006-HF	CGRA 4007-HF	Units
Max. Recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Max. DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Max. RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Peak forward surge current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	30							A
Max. average forward rectified current, at $T_L=75^\circ\text{C}$	$I_{(AV)}$	1.0							A
Max. instantaneous forward voltage at 1.0A	$V_F$	1.1							V
Max. DC reverse current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	$I_R$							$\mu\text{A}$
	$T_A=125^\circ\text{C}$	100							
Max. Reverse recovery time (Note1) $T_J=25^\circ\text{C}$	$T_{rr}$	2.5							$\mu\text{s}$
Typical junction capacitance (Note 2)	$C_J$	2.5							pF
Max. Thermal resistance (Note 3)	$R_{\theta JA}$	15.0							$^\circ\text{C}/\text{W}$
Operating temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Notes: 1. Reverse recovery test condition:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$   
 2. Measured at 1MHz and applied  $V_R=4.0$  volts.  
 3.  $8.0\text{mm}^2$  (0.013mm thick) land areas.

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

## Rating and Characteristic Curves (CGRA4001-HF Thru. CGRA4007-HF)

Fig.1 - Forward Current Derating Curve

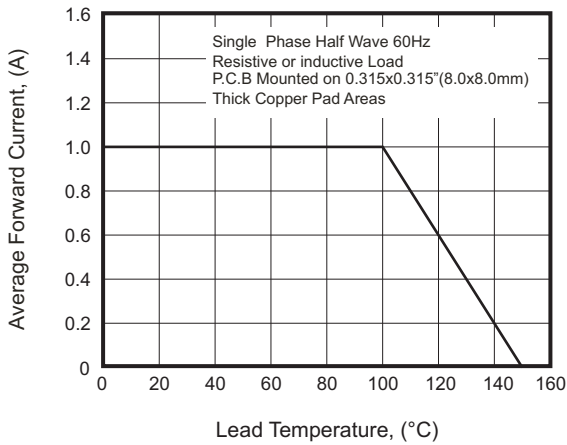


Fig.2 - Typical Instantaneous Forward Characteristics

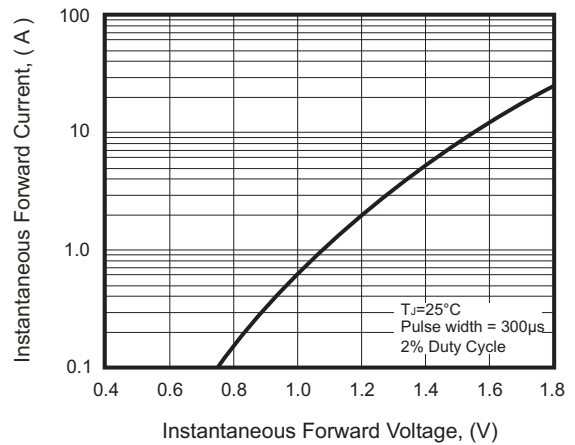


Fig.3 - Typical Reverse Characteristics

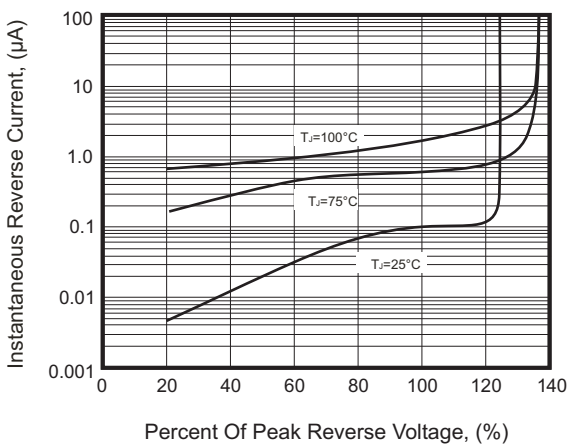


Fig.4 - Maximum Non-Repetitive peak Forward Surge Current

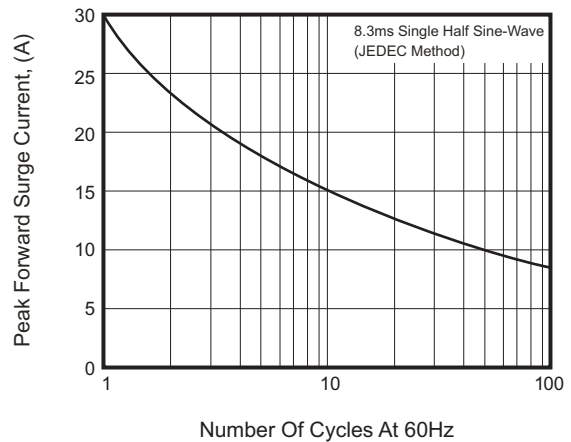


Fig.5 - Transient Thermal Impedance

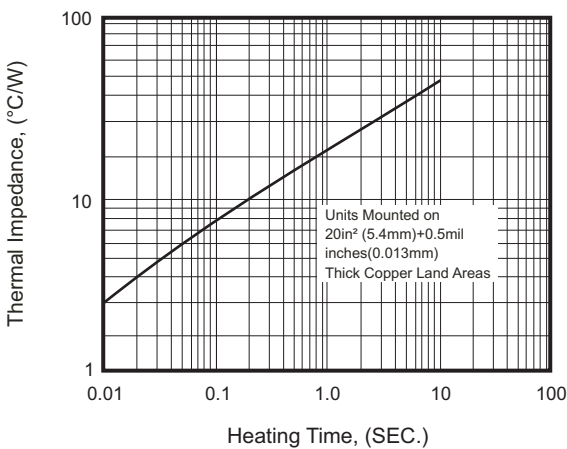
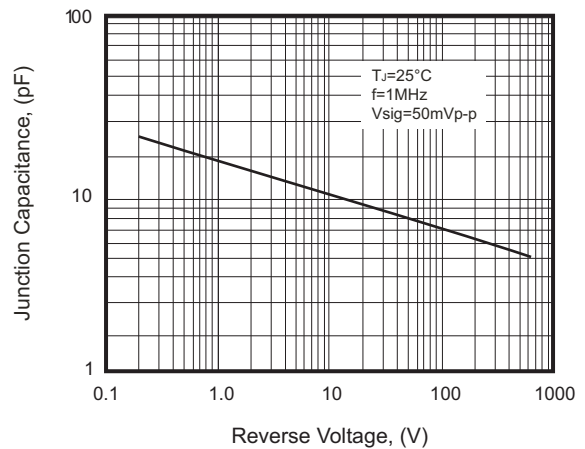
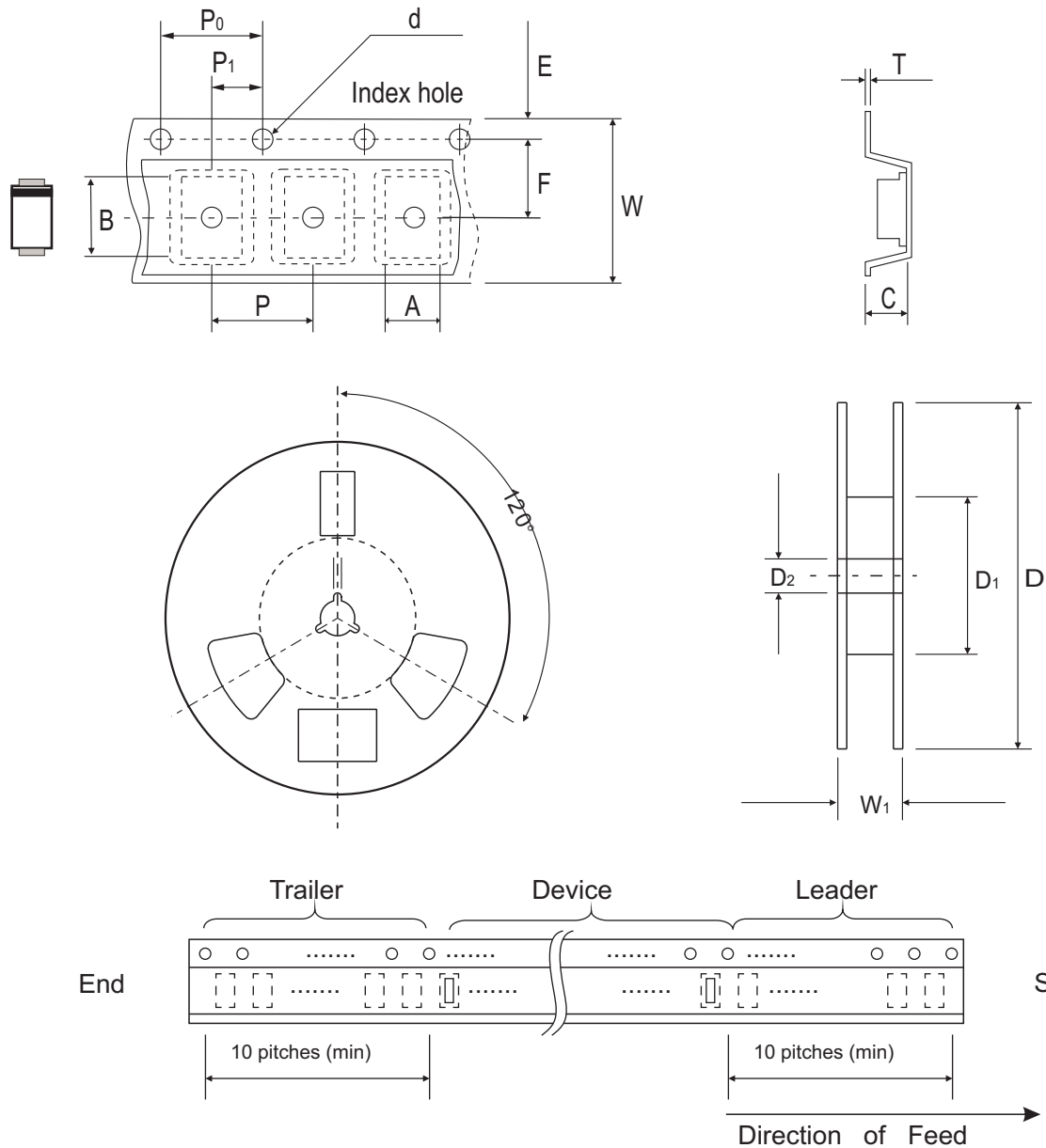


Fig.6 - Typical Junction Capacitance



## Reel Taping Specification

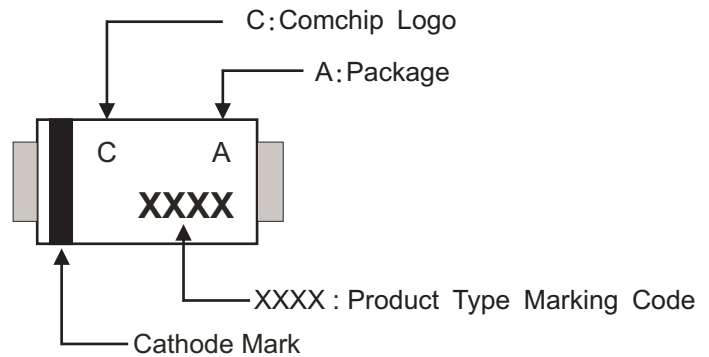


DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.4 Max.	5.78 Max.	2.94 Max.	1.55 + 0.10	330 Max.	50.00 Min.	20.2 Max.
	(inch)	0.134 Max.	0.227 Max.	0.115 Max.	0.061 + 0.004	12.99 Max.	1.969 Min.	0.795 Max.

DO-214AC (SMA)	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	12.00 ± 0.30	18.40 Max.
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 ± 0.012	0.724 Max.

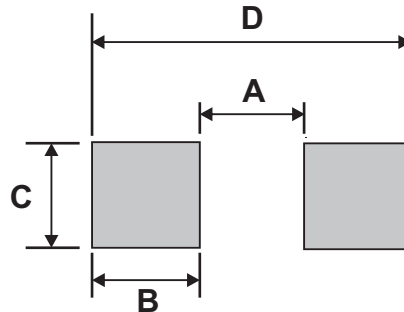
## Marking Code

Part Number	Marking Code
CGRA4001-HF	4001
CGRA4002-HF	4002
CGRA4003-HF	4003
CGRA4004-HF	4004
CGRA4005-HF	4005
CGRA4006-HF	4006
CGRA4007-HF	4007



## Suggested PAD Layout

SIZE	DO-214AC (SMA)	
	(mm)	(inch)
A	1.66 Max.	0.065 Max.
B	2.08 Min.	0.082 Min.
C	2.08 Min.	0.082 Min.
D	5.80 REF.	0.228 REF.



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
DO-214AC (SMA)	5,000	13