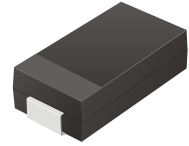


## CGRA4001-G Thru. CGRA4007-G

**Glass Passivated Type**  
**Reverse Voltage: 50 to 1000 Volts**  
**Forward Current: 1.0 Amp**  
**RoHS Device**

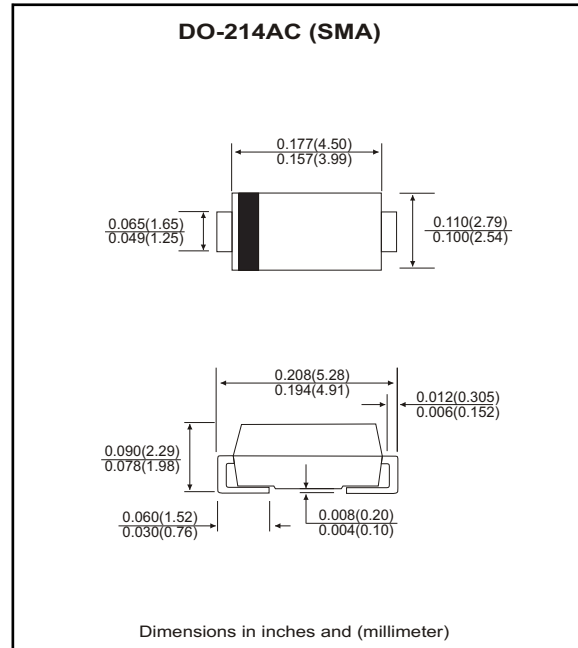


### Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Built in strain relief.
- High surge current capability.
- Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

### Mechanical data

- Case: JEDEC DO-214AC, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.063 grams



### Maximum Ratings and Electrical Characteristics

Parameter	Symbol	CGRA 4001-G	CGRA 4002-G	CGRA 4003-G	CGRA 4004-G	CGRA 4005-G	CGRA 4006-G	CGRA 4007-G	Units
Max. repetitive 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 surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method) $T_L=90^{\circ}C$	$I_{FSM}$	30							A
Max. average forward current(see fig.1)	$I_o$	1.0							A
Max. instantaneous forward voltage at 1.0A	$V_F$	1.1							V
Max. DC reverse current at rated	$I_R$	5.0							$\mu A$
DC blocking voltage	$I_R$	50							
Typical Junction Capacitance (Note 1)	$R_{\theta JA}$	50							$^{\circ}C/W$
	$R_{\theta JL}$	90							
Typical Thermal Resistance(Note 2)	$T_{rr}$	1.8							$\mu s$
Max. operating junction temperature	$T_J$	-55 to +150							$^{\circ}C$
Storage temperature	$T_{STG}$	-55 to +150							$^{\circ}C$

Notes: 1. Thermal resistance from junction to ambient and from junction to lead mounted on 0.2x0.2"(5.0x5.0mm) copper pad areas.  
 2. Reverse recovery test condition:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

## Rating and Characteristic Curves (CGRA4001-G thru. CGRA4007-G)

Fig.1 - Forward Current Dearth Curve

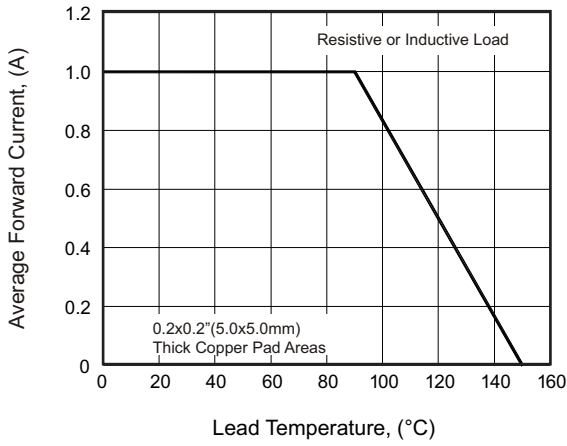


Fig.2 - Maximum NON-Repetitive peak Forward Surge Current

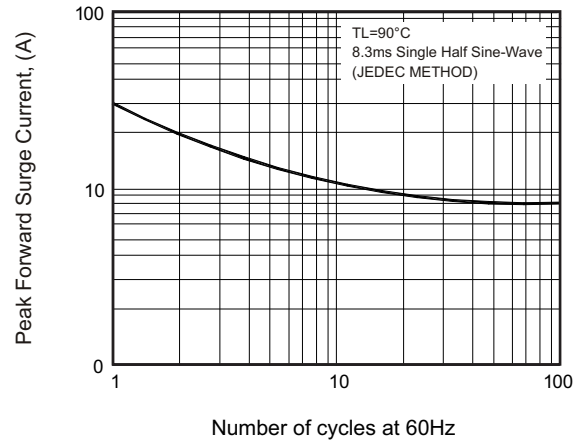


Fig.3 - Typical Instantaneous Forward Characteristics

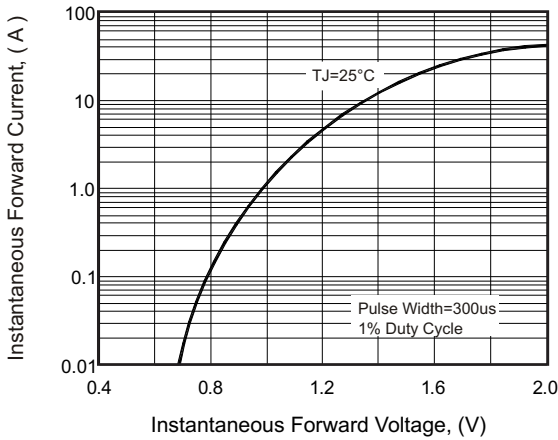


Fig.4 - Typical Reverse Characteristics

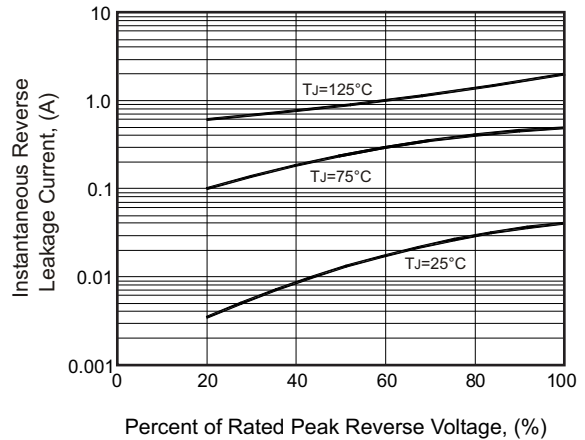


Fig.5 - Typical Junction Capacitance

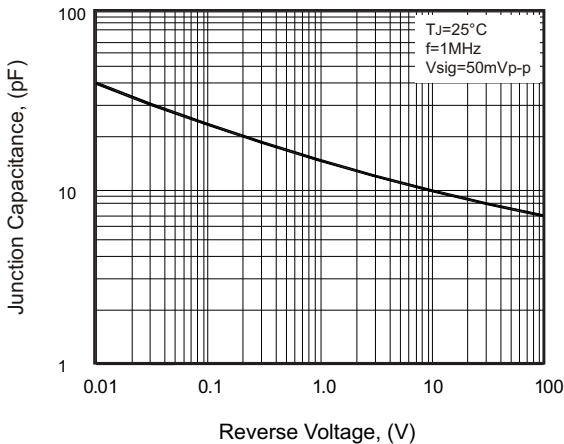
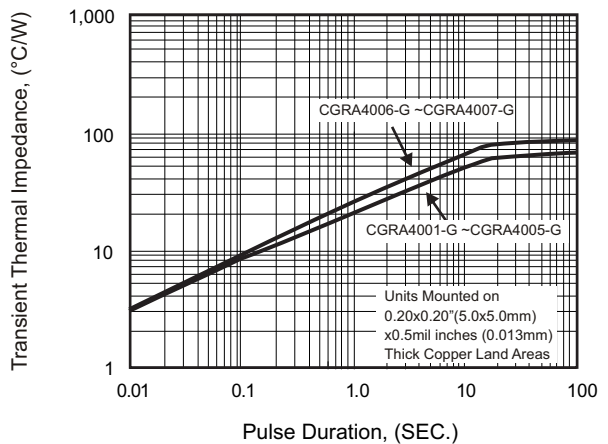
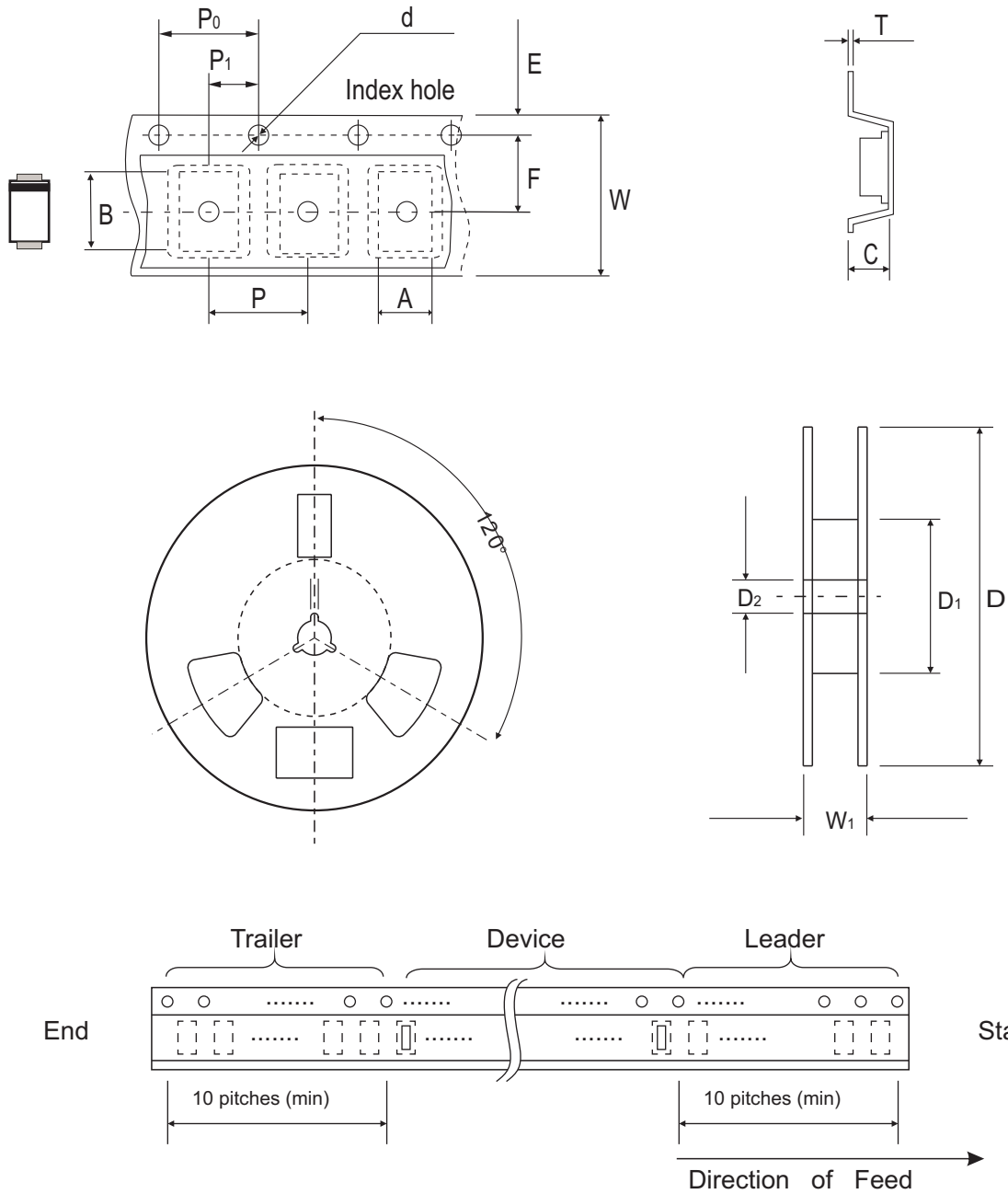


Fig.6 - Transient Thermal Impedance



## Reel Taping Specification

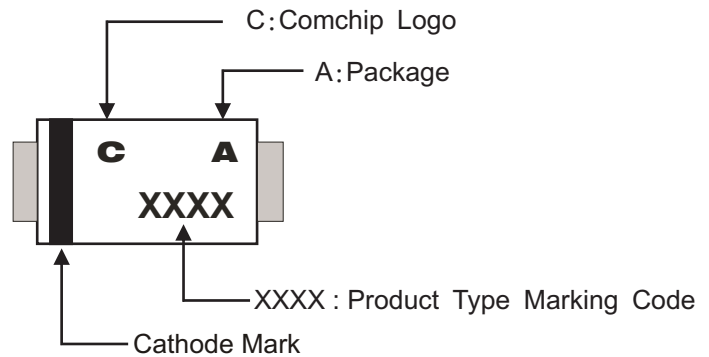


DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.70 (max)	5.30 (max)	2.66 (max)	1.50 ± 0.10	330.00 ± 2.00	50.00 (min)	13.50 ± 1.00
	(inch)	0.106 (max)	0.209 (max)	0.105 (max)	0.059 ± 0.004	13.00 ± 0.079	1.969 (min)	0.531 ± 0.039

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	0.216 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 ± 0.012	0.724 (max)

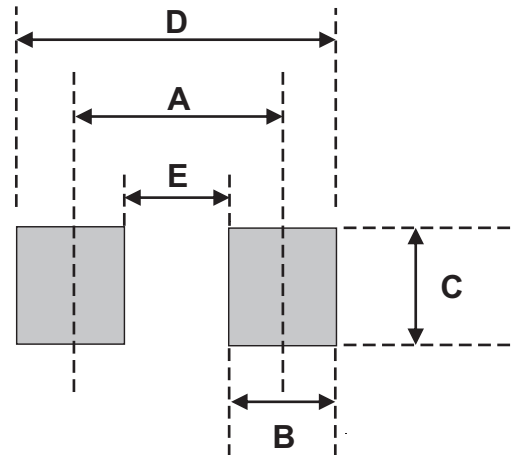
## Marking Code

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



## Suggested PAD Layout

SIZE	DO-214AC (SMA)	
	(mm)	(inch)
A	4.50	0.177
B	1.50	0.059
C	3.60	0.142
D	6.00	0.236
E	3.00	0.118



## Standard Packaging

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