

Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Comchip Technology](#)
[CGRA4001-G](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

SMD General Purpose Rectifiers



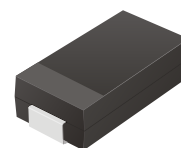
CGRA4001-G Thru. CGRA4007-G

Glass Passivated Type

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

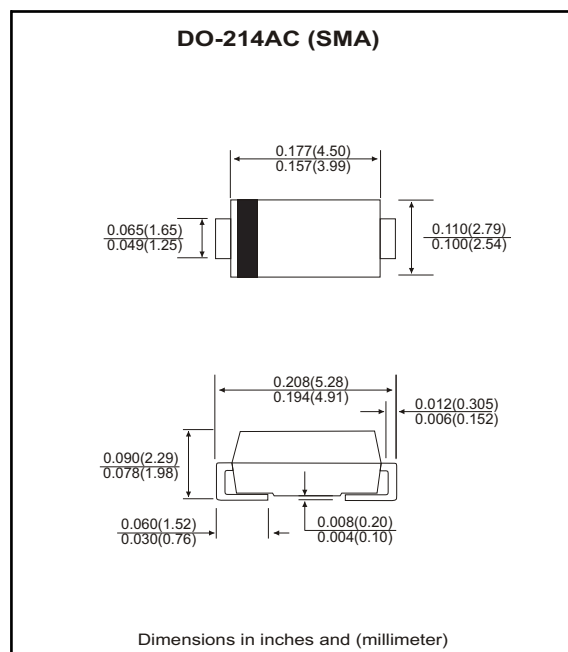


Features

- 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°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	T _A =25°C	I _R	5.0							μA
DC blocking voltage	T _A =125°C	I _R	50							
Typical Junction Capacitance (Note 1)		R _{θJA}	50							°C/W
		R _{θJL}	90							
Typical Thermal Resistance(Note 2)		T _{rr}	1.8							μs
Max. operating junction temperature		T _J	-55 to +150							°C
Storage temperature		T _{STG}	-55 to +150							°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: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$

SMD General Purpose Rectifiers

Comchip
SMD Diode Specialist

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

Fig.1 - Forward Current De-rating Curve

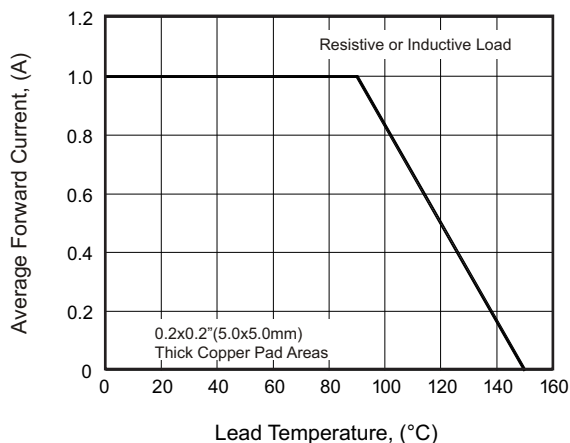


Fig.2 - Maximum NON-Repetitive peak Forward Surge Current

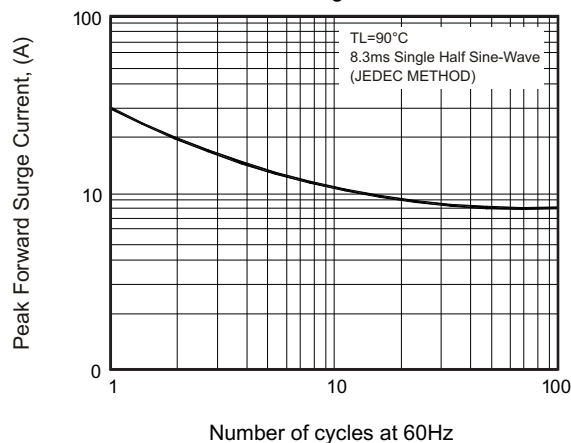


Fig.3 - Typical Instantaneous Forward Characteristics

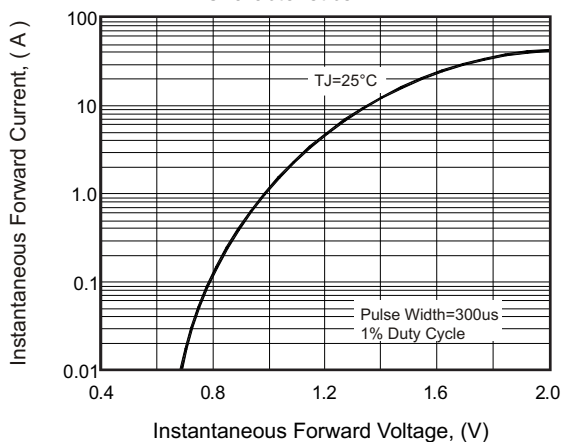


Fig.4 - Typical Reverse Characteristics

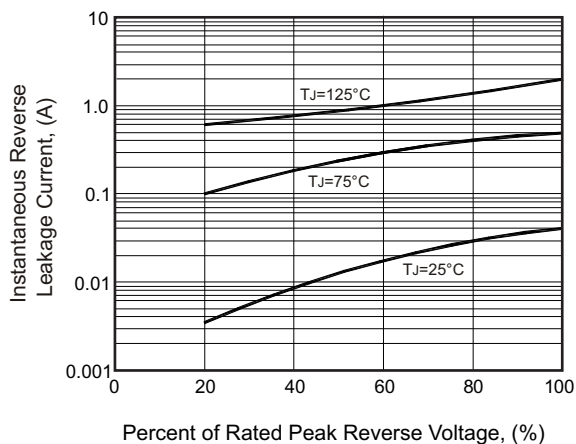


Fig.5 - Typical Junction Capacitance

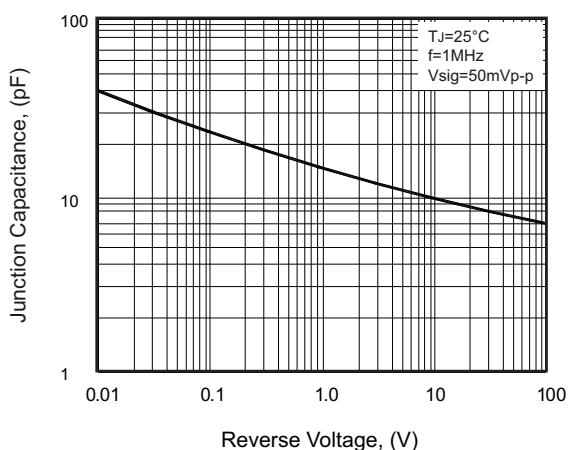
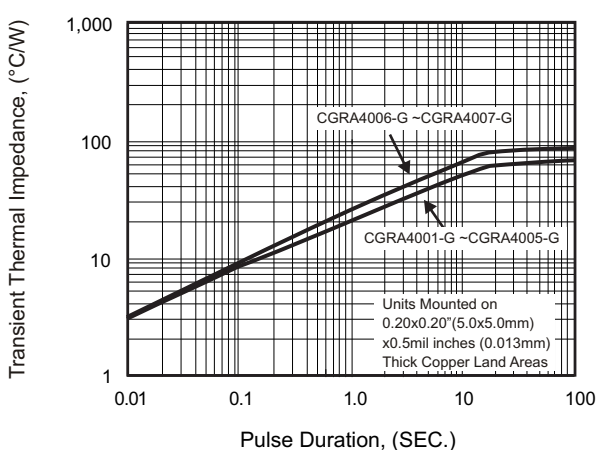
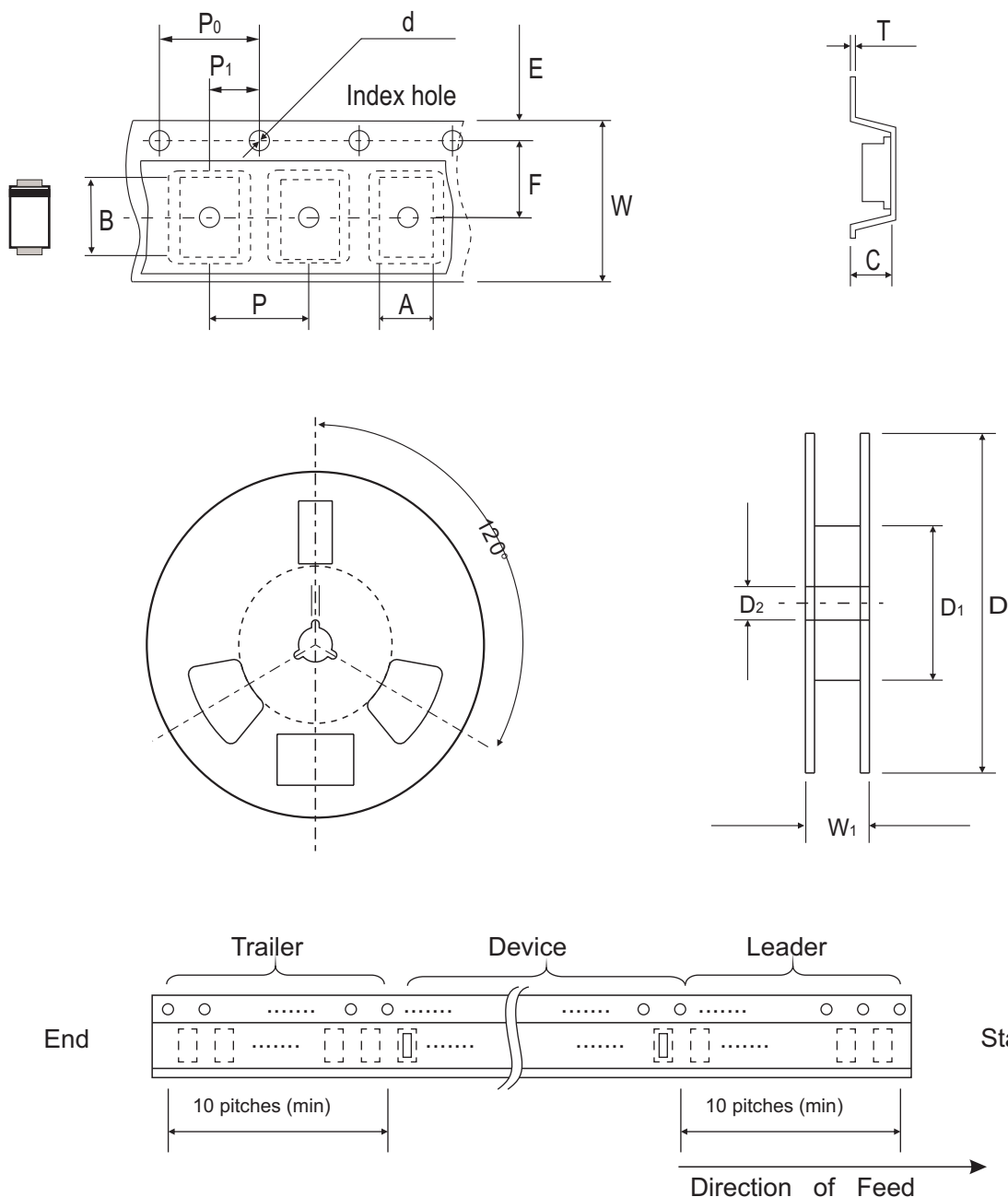


Fig.6 - Transient Thermal Impedance



SMD General Purpose Rectifiers

Reel Taping Specification



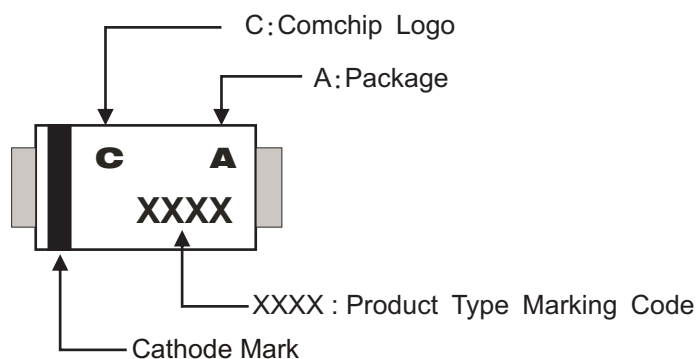
DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.70 (max)	5.30 (max)	2.66 (max)	1.50 ± 0.10	330.00 ± 2.00	50.00 (min)	13.50 ± 1.00
	(inch)	0.106 (max)	0.209 (max)	0.105 (max)	0.059 ± 0.004	13.00 ± 0.079	1.969 (min)	0.531 ± 0.039

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)

SMD General Purpose Rectifiers

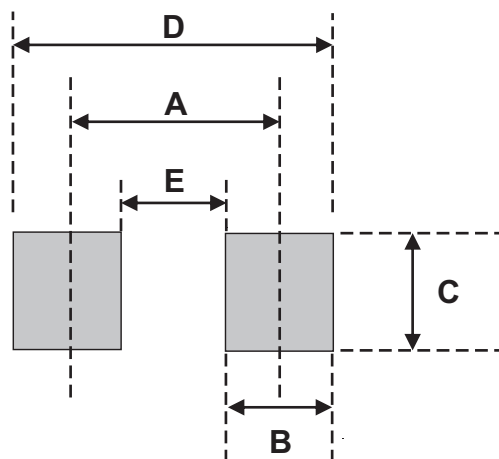
Marking Code

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