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SMD Ultra Fast Recovery Rectifiers

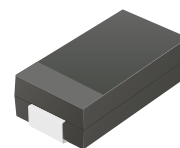


CURC301-G Thru. CURC307-G

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3.0 Amp

RoHS Device

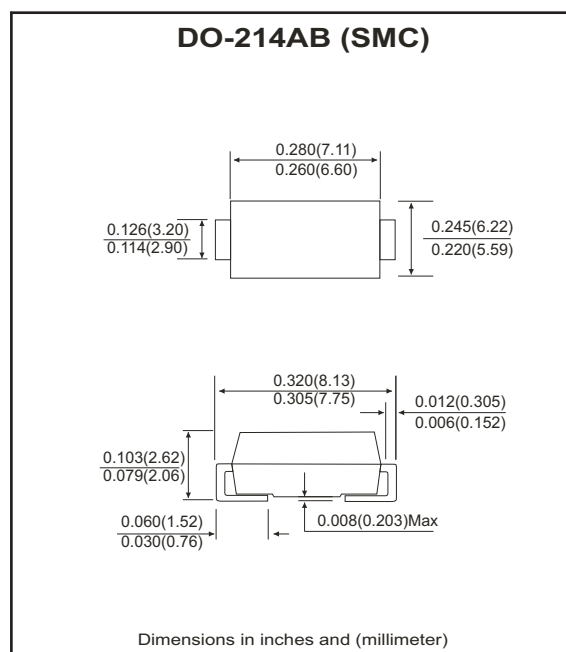


Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Fast recovery time: 50~75nS.
- Low leakage current.

Mechanical data

- Case: JEDEC DO-214AB, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.21 grams



Maximum Ratings and Electrical Characteristics

Parameter	Symbol	CURC 301-G	CURC 302-G	CURC 303-G	CURC 304-G	CURC 305-G	CURC 306-G	CURC 307-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)	I_{FSM}	100							A
Max. average forward current	I_o	3.0							A
Max. instantaneous forward voltage at 3.0A	V_F	1.0			1.3	1.7			V
Reverse recovery time	T_{rr}	50				75			nS
Max. DC reverse current at $T_A=25^{\circ}C$ rated DC blocking voltage $T_A=125^{\circ}C$	I_R					5.0	150		μA
Max. thermal resistance (Note 1)	$R_{\theta JL}$					20			$^{\circ}C/W$
Max. operating junction temperature	T_J					150			$^{\circ}C$
Storage temperature	T_{STG}					-55 to +150			$^{\circ}C$

Notes: 1. Thermal resistance from junction to lead mounted on P.C.B. with 8.0×8.0 mm square land area.

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RATING AND CHARACTERISTIC CURVES (CURC301-G thru CURC307-G)

Fig.1 Reverse Characteristics

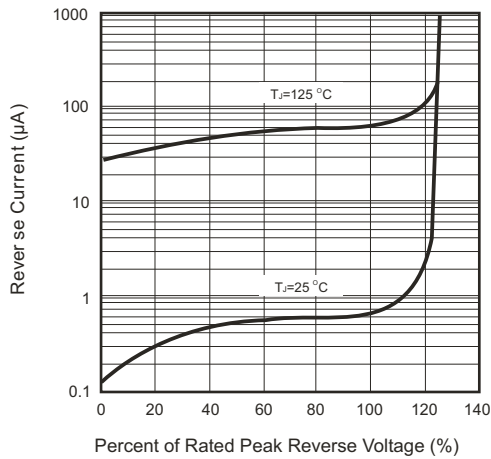


Fig.2 Forward Characteristics

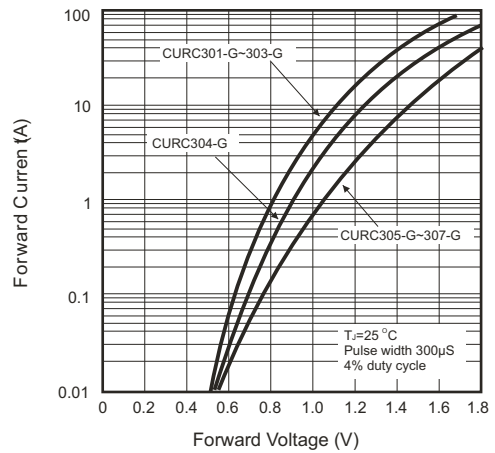


Fig.3 Junction Capacitance

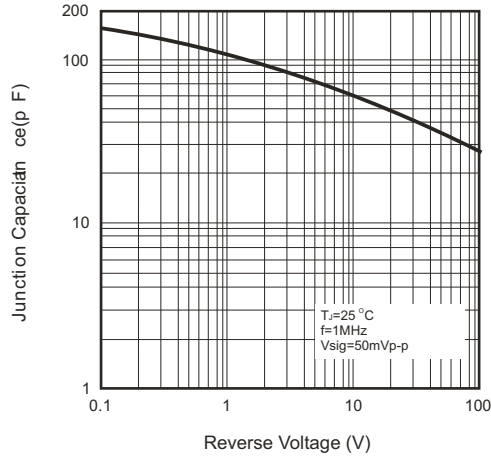


Fig.4 Non-repetitive Forward Surge Current

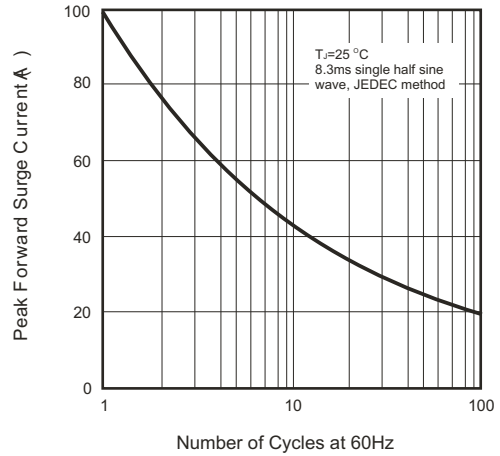


Fig.5 Test Circuit Diagram and Reverse Recovery Time Characteristics

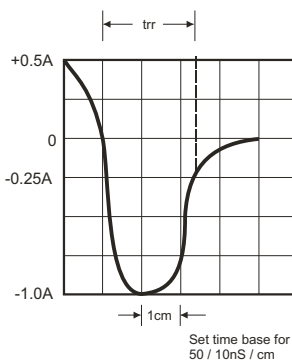
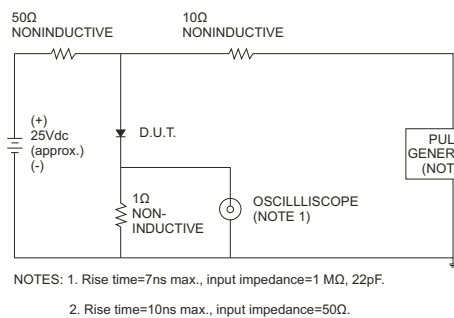
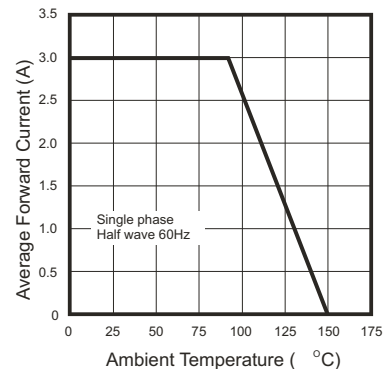


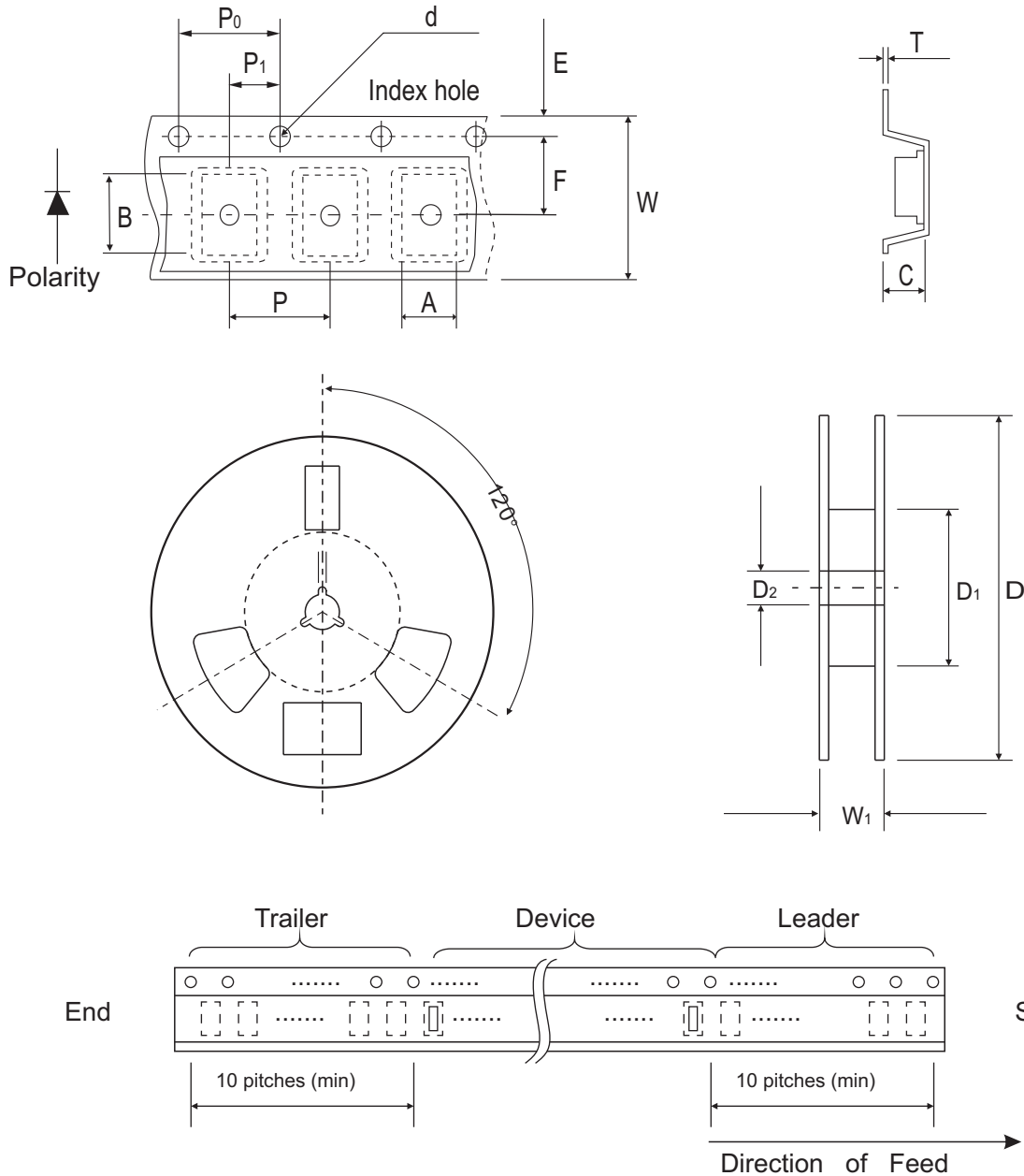
Fig.6 Current Derating Curve



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Reel Taping Specification



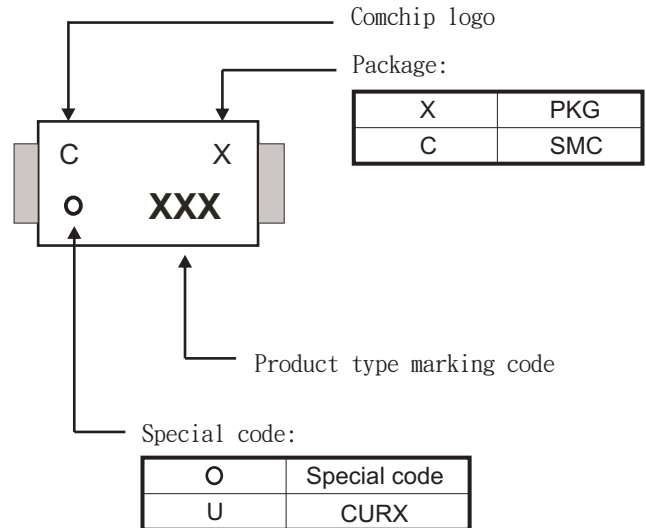
SMC (DO-214AB)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	6.3 Max	8.6 Max	2.9 Max	1.50 ± 0.1	330 ± 2.0	50.0 min	13.5 ± 1
	(inch)	0.248 Max	0.339 Max	0.114 Max	0.060 ± 0.039	13.00 ± 0.079	1.969 min	0.531 ± 0.039

SMC (DO-214AB)	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	16.0 ± 0.30	22.4 Max
	(inch)	0.069 ± 0.004	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.630 ± 0.012	0.882 Max

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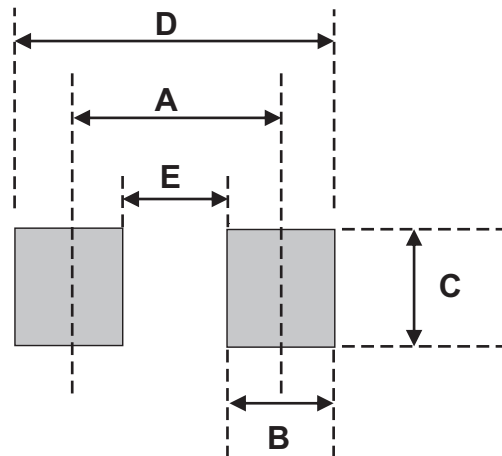
Marking Code

Part Number	Marking Code
CURC301-G	301
CURC302-G	302
CURC303-G	303
CURC304-G	304
CURC305-G	305
CURC306-G	306
CURC307-G	307



Suggested PAD Layout

SIZE	DO-214AB (SMC)	
	(mm)	(inch)
A	6.20	0.244
B	1.60	0.063
C	4.80	0.189
D	7.80	1.441
E	4.6	0.181



Standard Packaging

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
DO-214AB (SMC)	3,000	13