

### ■ Features

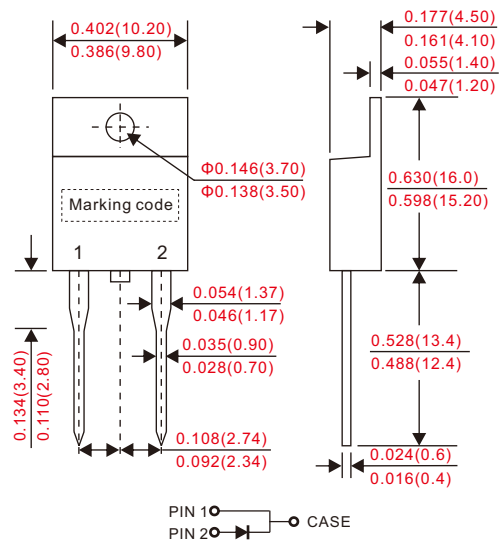
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Low reverse current.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### ■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC TO-220AC molded plastic body.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity : As marked.
- Mounting Position : Any.
- Weight : Approximated 2.24 gram.

### ■ Outline

TO-220AC



Dimensions in inches and (millimeters)

### ■ Maximum ratings and electrical characteristics

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

Parameter	Conditions	Symbol	2CR086AC	UNIT
Marking code			2CR086AC	
Peak repetitive reverse voltage		$V_{RRM}$		
Working peak reverse voltage		$V_{RWM}$	600	V
DC blocking voltage		$V_{RM}$		
RMS reverse voltage		$V_{R(RMS)}$	420	V
Forward rectified current		$I_O$	8	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	125	A
Thermal resistance	Junction to case	$R_{\theta JC}$	3	°C/W
Operating and Storage temperature		$T_J, T_{STG}$	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Single Pulse Avalanche Energy	L = 40mH	$E_{AVL}$	20			mJ
Forward voltage drop	$I_F = 8A, T_J = 25^\circ C$	$V_F$			2.1	V
	$I_F = 8A, T_J = 125^\circ C$				1.8	
Reverse current	$V_R = V_{RRM}, T_J = 25^\circ C$	$I_R$			10	uA
	$V_R = V_{RRM}, T_J = 125^\circ C$				150	
Reverse recovery time	$I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$	$t_{rr}$		23		ns

Rating and characteristic curves

Fig. 1 - Maximum Non-repetitive Forward Surge Current

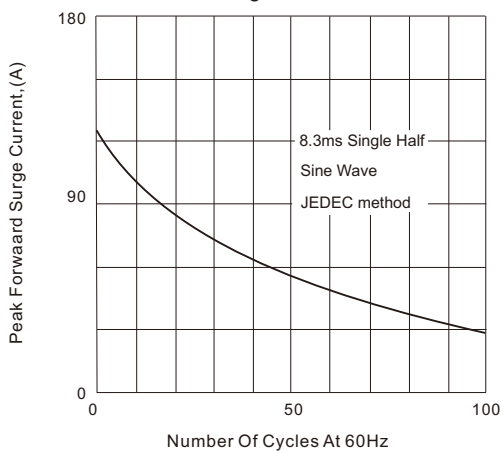


Fig. 2 - Instantaneous Forward Characteristics

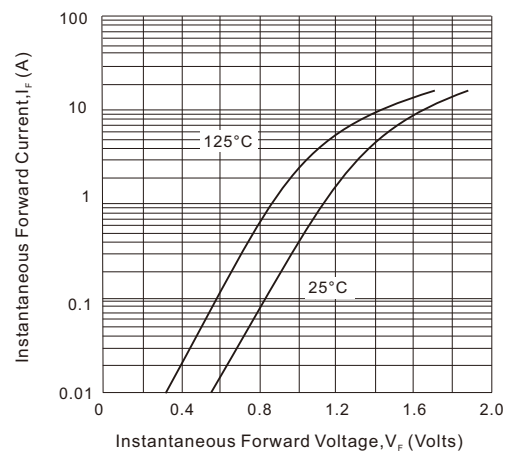


Fig. 3 - Reverse Characteristics

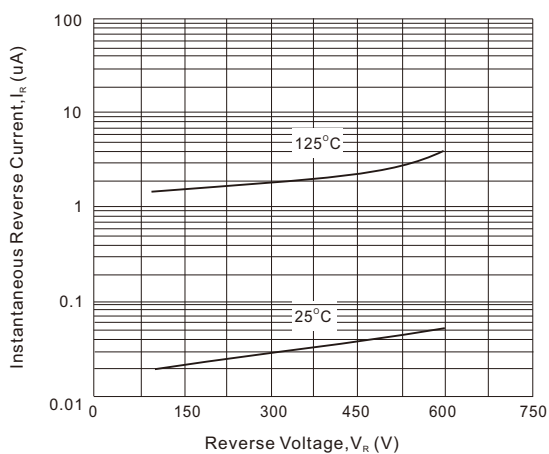
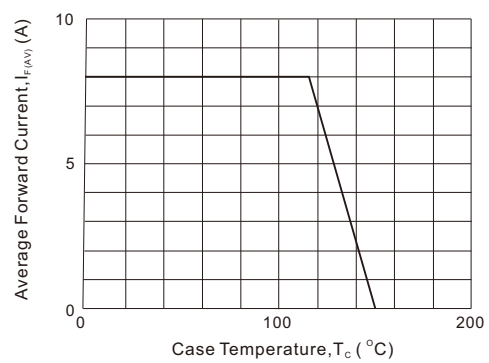


Fig.4 - Forward Current Derating Curve



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