

■ Features

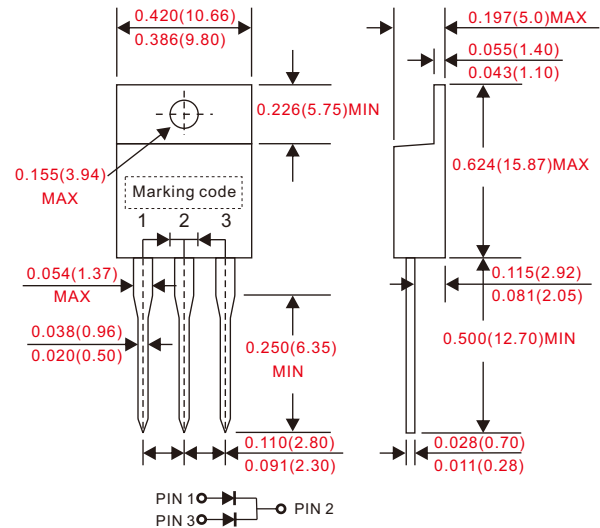
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CS20L40CTG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC TO-220AB molded plastic body.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: As marked.
- Mounting Position : Any.
- Weight : Approximated 2.25 gram.

■ Outline

TO-220AB



■ 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	CS20L40CT-A	CS20L45CT-A	UNIT
Marking code			CS20L40CT	CS20L45CT	
Peak repetitive reverse voltage		V_{RRM}			
Working peak reverse voltage		V_{RWM}	40	45	V
DC blocking voltage		V_{RM}			
Forward rectified current (total device)	$T_c = 110^\circ\text{C}$	I_O	20		A
Forward surge current (per diode)	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	250		A
Peak repetitive reverse surge current (per diode)	2us - 1kHz	I_{RRM}	3		A
Thermal resistance(1) (per diode)	Junction to case	R_{BJC}	2		$^\circ\text{C}/\text{W}$
Operating and Storage temperature		T_J, T_{STG}	-65 ~ +150		$^\circ\text{C}$

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop (per diode)	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$	V_F			500	mV
	$I_F = 10\text{A}, T_J = 125^\circ\text{C}$				470	
	$I_F = 20\text{A}, T_J = 25^\circ\text{C}$				600	
Reverse current (per diode)	$V_R = V_{RRM}, T_J = 25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM}, T_J = 125^\circ\text{C}$				100	

Note : 1. Thermal resistance from junction to case per leg, with heatsink size (1.35" x 0.95" x 0.18") Al-plate.

■ Rating and characteristic curves

Fig. 1 - Instantaneous Forward Characteristics (per diode)

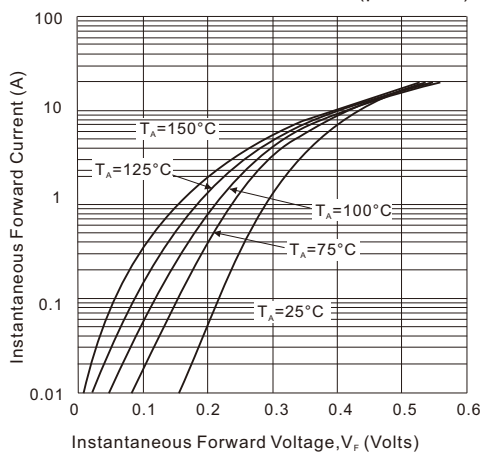


Fig.2 - Forward Current Derating Curve (per diode)

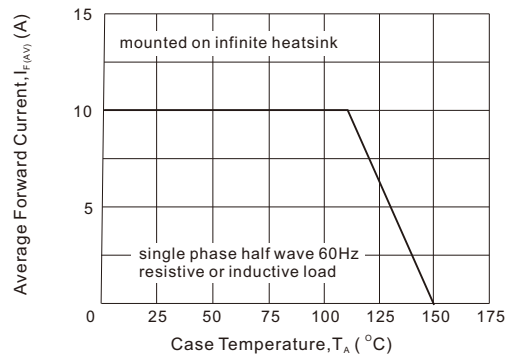
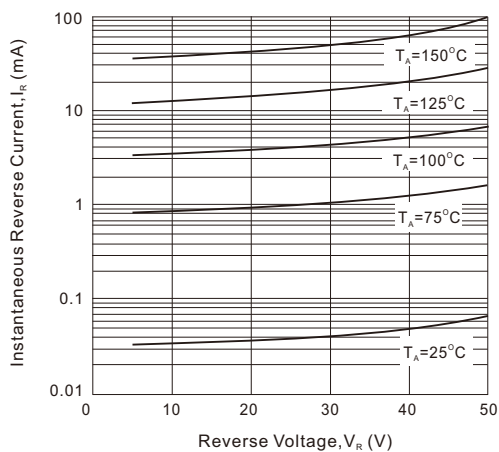


Fig. 3 - Reverse Characteristics (per diode)



- CITC reserves the right to make changes to this document and its products and specifications at any time without notice.
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- CITC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does CITC assume any liability for application assistance or customer product design.
- CITC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
- No license is granted by implication or otherwise under any intellectual property rights of CITC.
- CITC products are not authorized for use as critical components in life support devices or systems without express written approval of CITC.