

■ Features

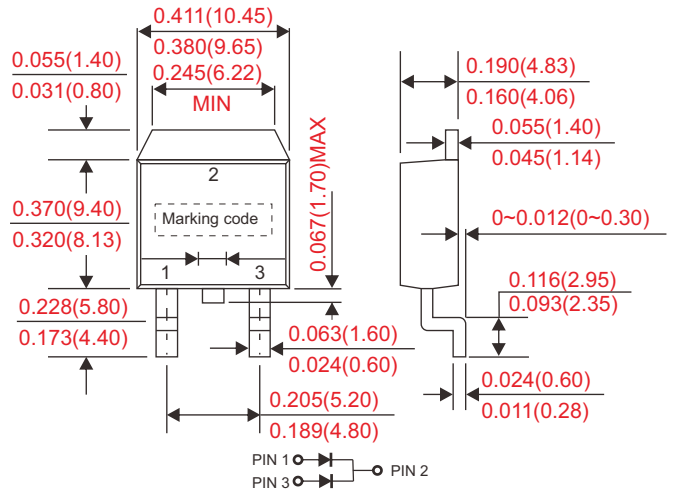
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-263/D²PAK
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 1.70 gram.

■ Outline

D²PAK(TO-263)



Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

■ Circuit Diagram



Parameter	Conditions	Symbol	CB40S100CT	UNIT
Marking code			CB40S100CT	
Peak repetitive reverse voltage		V_{RRM}		
Working peak reverse voltage		V_{RWM}	100	V
DC blocking voltage		V_{RM}		
Forward rectified current (total device)		I_O	40	A
Forward surge current (per diode)	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	300	A
Peak repetitive reverse surge current (per diode)	2us - 1kHz	I_{RRM}	1	A
Thermal resistance(1) (per diode)	Junction to case	R_{BJC}	2	°C/W
Storage temperature		T_{STG}	-55 ~ +150	°C
Operating Junction temperature		T_J	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop (per diode)	$I_F = 20A, T_J = 25^\circ C$	V_F			730	mV
	$I_F = 20A, T_J = 125^\circ C$				670	
Reverse current (per diode)	$V_R = V_{RRM}, T_J = 25^\circ C$	I_R			0.5	mA
	$V_R = V_{RRM}, T_J = 125^\circ C$				45	

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 - Forward Current Derating Curve

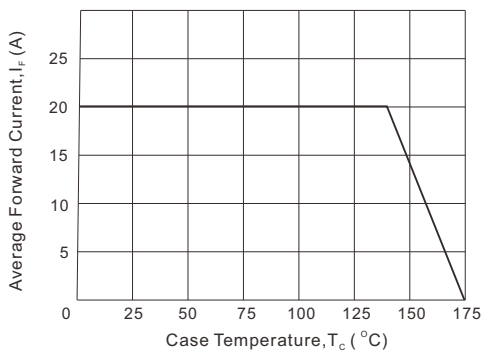


Fig. 2 - Instantaneous Forward Characteristics (per diode)

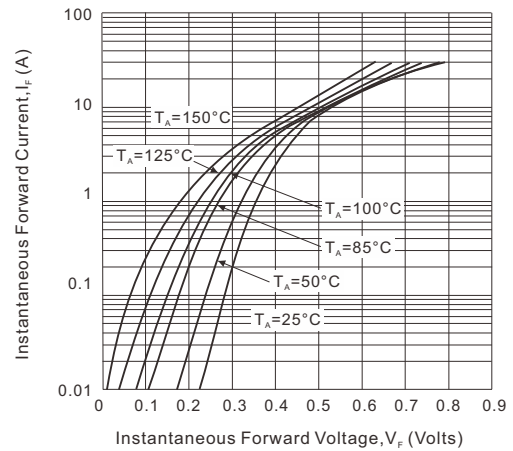
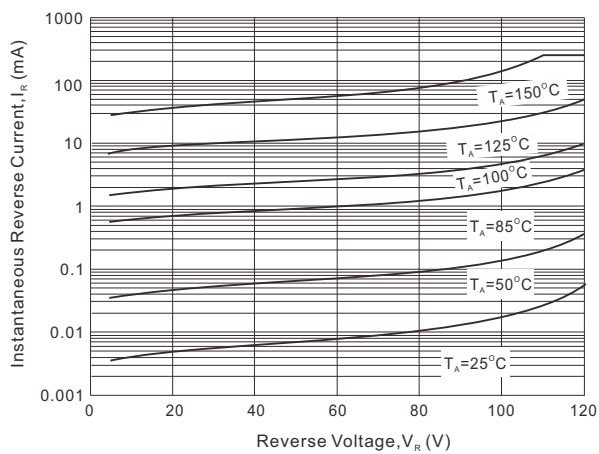
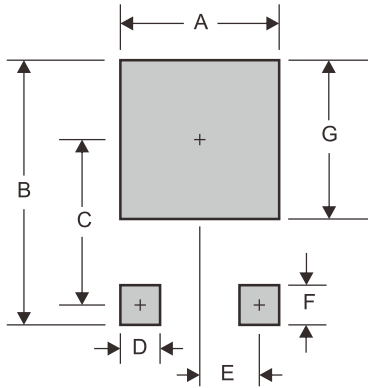


Fig. 3 - Reverse Characteristics (per diode)



■ D²PAK(TO-263) foot print



A	B	C	D	E	F	G
0.425 (10.80)	0.665 (16.90)	0.374 (9.50)	0.071 (1.80)	0.098 (2.50)	0.138 (3.50)	0.449 (11.40)

Dimensions in inches and (millimeters)

- 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.