

Main Product Characteristics

$I_{F(AV)}$	2x5A
$V_{RRM}$	100V
$T_J$	150°C
$V_{(TYP)}$	0.62V

Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSB10100CTG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

Mechanical data

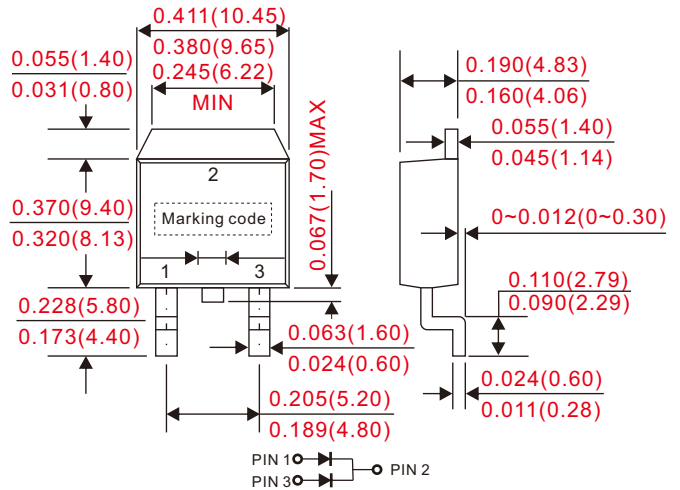
- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-263 / D<sup>2</sup>PAK
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 1.70 gram.

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%.

Outline

D<sup>2</sup>PAK(TO-263)



Dimensions in inches and (millimeters)

Parameter	Conditions	Symbol	CSB10100CT-A	UNIT
Marking code			CSB10100CT	
Peak repetitive reverse voltage		$V_{RRM}$		
Working peak reverse voltage		$V_{RWM}$	100	V
DC blocking voltage		$V_{RM}$		
RMS reverse voltage		$V_{R(RMS)}$	71	V
Forward rectified current		$I_O$	10	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	120	A
Thermal resistance(1)	Junction to case	$R_{BJC}$	4	°C/W
Operating and Storage temperature		$T_J, T_{STG}$	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	$I_F = 5A, T_J = 25^\circ C$	$V_F$			800	mV
	$I_F = 5A, T_J = 125^\circ C$			620	710	
Reverse current	$V_R = V_{RRM}, T_J = 25^\circ C$	$I_R$			0.2	mA
	$V_R = V_{RRM}, T_J = 125^\circ C$				25	

Note : 1. Thermal resistance from junction to case per leg, with heatsink size(1.35" x 0.95" x 0.18") Al-plate.  
 2. Device mounted on FR-4 substrate PC board, 1oz copper with minimum recommended pad layout.  
 3. Device mounted on Polyimide substate, 1\*MRP, 2oz, copper, PC boards.

Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve (per diode)

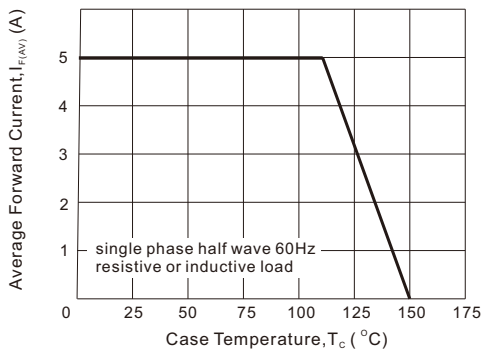


Fig. 2 - Instantaneous Forward Characteristics (per diode)

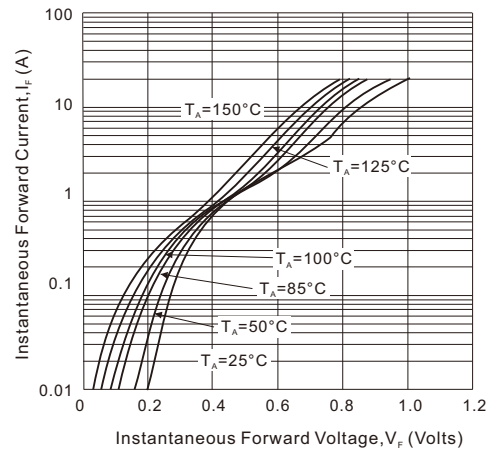
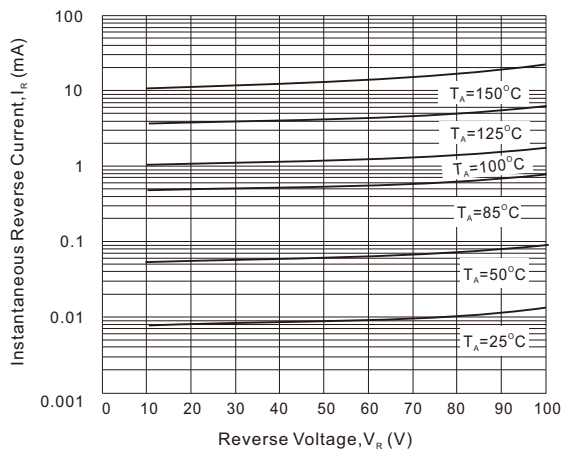
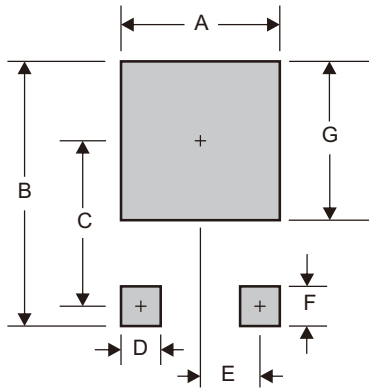


Fig. 3 - Reverse Characteristics (per diode)



■ D<sup>2</sup>PAK(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.