

■ Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSB20S45CTG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

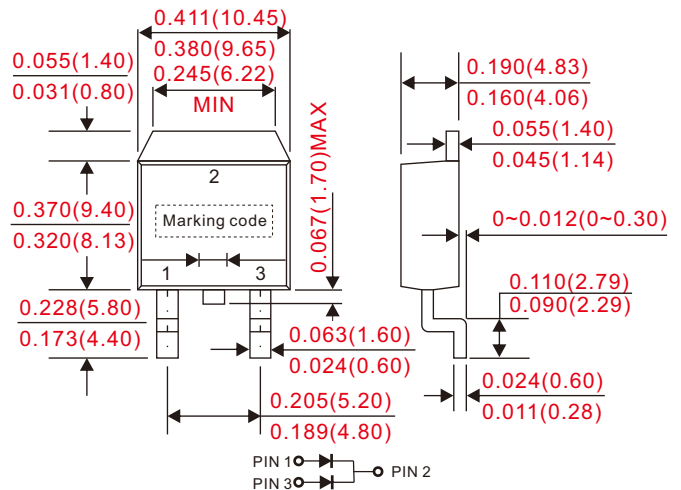
- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC TO-220AB molded plastic body over passivated chip.
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed.
- Polarity: Color band denotes cathode end.
- Mounting Position : Any.
- Weight : Approximated 2.25 gram.

■ 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

D²PAK(TO-263)



Parameter	Conditions	Symbol	CSB20S45CT-A	UNIT
Marking code			CSB20S45CT	
Peak repetitive reverse voltage		V_{RRM}		
Working peak reverse voltage		V_{RWM}	45	V
DC blocking voltage		V_{RM}		
Forward rectified current (total device)		I_O	20	A
Forward surge current (per diode)	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	200	A
Peak repetitive reverse surge current (per diode)	2us - 1kHz	I_{RRM}	3	A
Thermal resistance(1) (per diode)	Junction to ambient	R_{BJC}	30	°C/W
Operating and Storage temperature		T_J, T_{STG}	-65 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop (per diode)	$I_F = 10A, T_J = 25^\circ C$	V_F			470	mV
	$I_F = 10A, T_J = 125^\circ C$				440	
	$I_F = 20A, T_J = 25^\circ C$				600	
Reverse current (per diode)	$V_R = V_{RRM}, T_J = 25^\circ C$	I_R			0.5	mA
	$V_R = V_{RRM}, T_J = 125^\circ C$				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 - Forward Current Derating Curve (per diode)

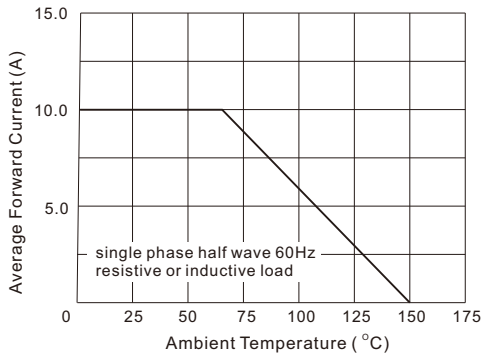


Fig. 2 - Instantaneous Forward Characteristics (per diode)

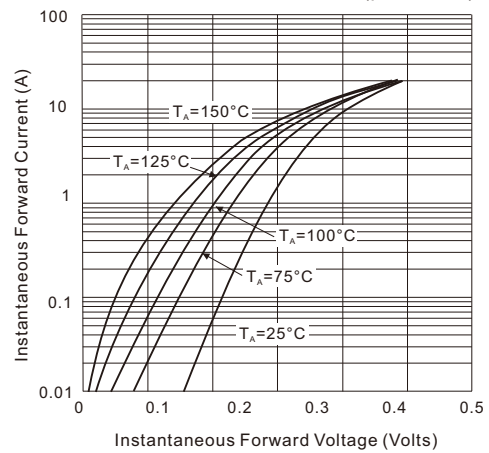
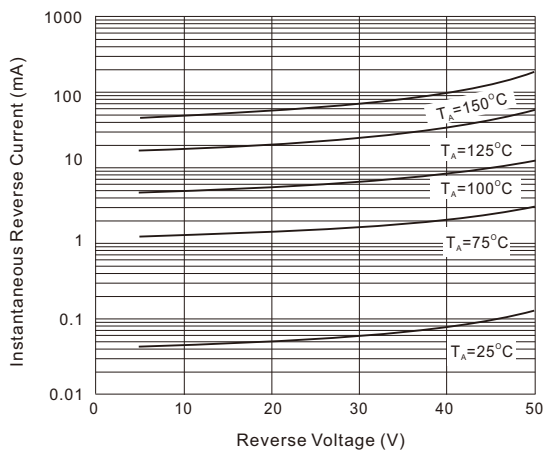


Fig. 3 - Reverse Characteristics (per diode)



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