

Main Product Characteristics

$I_{F(AV)}$	2x10A
V_{RRM}	45V
T_J	150°C
$V_{(Typ)}$	0.36V

■ 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

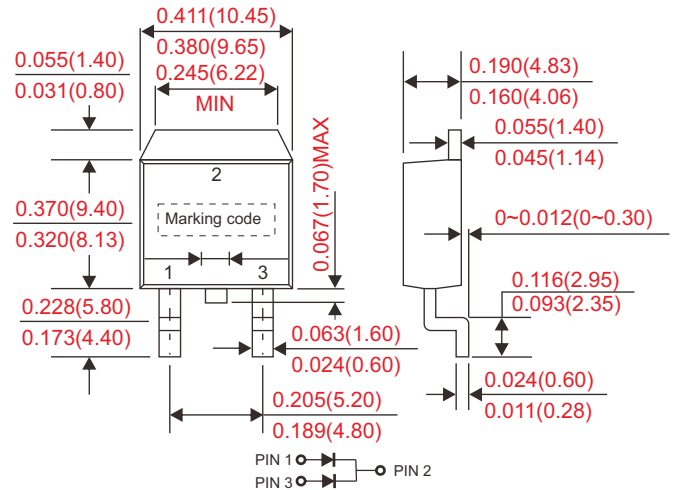
- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC TO-220AB molded plastic body over passivated chip.
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed.
- Polarity: Color band denotes cathode end.
- Mounting Position : Any.
- Weight : Approximated 2.25 gram.

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

■ Outline

D²PAK(TO-263)



Dimensions in inches and (millimeters)

■ Circuit Diagram



Parameter	Conditions	Symbol	CSB20S45CT-A	UNIT
Marking code			CSB20S45CT	
Working peak reverse voltage		V_{RWM}	45	V
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)	Junction to case	$R_{\theta JC}$	4	°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)	$I_F = 10A, T_J = 25^\circ C$	V_F			470	mV
	$I_F = 10A, T_J = 125^\circ C$			360	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 (total device)

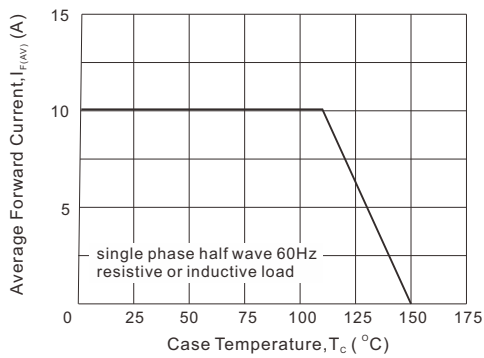


Fig. 2 - Instantaneous Forward Characteristics (per diode)

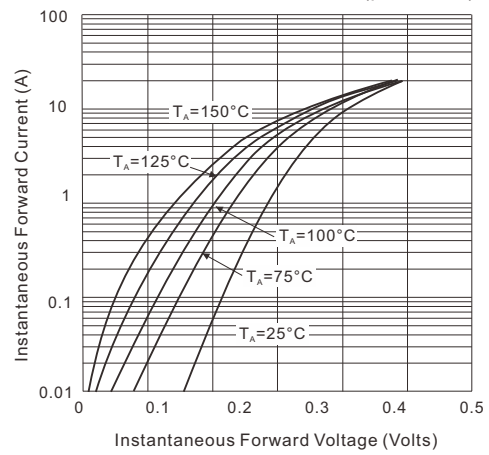
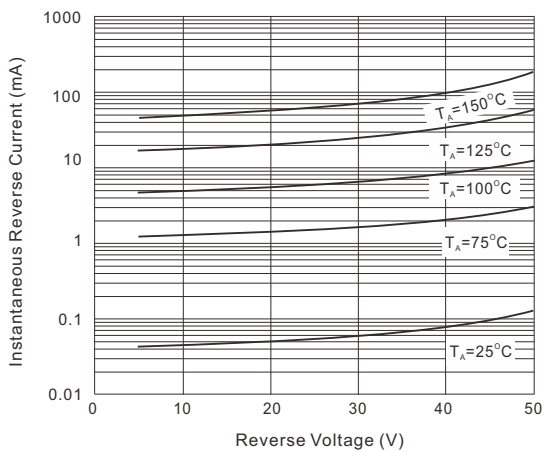
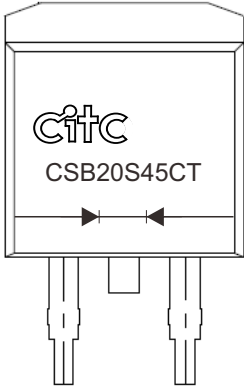



Fig. 3 - Reverse Characteristics (per diode)



■ Marking Information



CSB20S45CT : Product type marking code

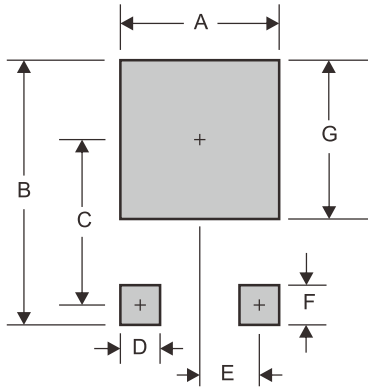
 : CITC Logo

■ Ordering / Packing Information

	Part number	Case	Q'TY/Tube (PCS)	Q'TY/Box (PCS)	Q'TY/Carton (PCS)
Halogen	CSB20S45CT-A	TO-263	50	1000	5000
			Q'TY/Reel (PCS)	Q'TY/Box (PCS)	Q'TY/Carton (PCS)
			800	800	4000
	Part number	Case	Q'TY/Tube (PCS)	Q'TY/Box (PCS)	Q'TY/Carton (PCS)
Halogen Free	CSB20S45CTG-A	TO-263	50	1000	5000
			Q'TY/Reel (PCS)	Q'TY/Box (PCS)	Q'TY/Carton (PCS)
			800	800	4000

Notes : 1. For packaging details please reference our website at <http://www.citcorp.com.tw/tchinese/products/index.php>

■ 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)

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