CST10S40CT

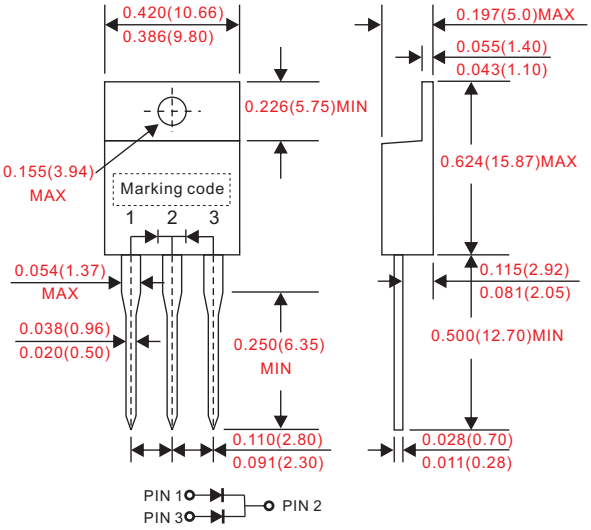
10A Trench Low Barrier Diode

■ Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex.CST10S40CTG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Outline

TO-220AB



Dimensions in inches and (millimeters)

■ 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 guranteed.
- 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%.

Parameter	Conditions	Symbol	CST10S40CT	UNIT
Marking code			CST10S40CT	
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_{RM}	40	V
Forward rectified current (total device)	T_C = 110°C	I_O	10	A
Forward surge current (per diode)	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	150	A
Peak repetitive reverse surge current (per diode)	2us - 1kHz	I_{RRM}	3	A
Thermal resistance(1) (per diode)	Junction to case	$R_{\theta JC}$	2	°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 = 5A, T_J = 25°C	V_F			440	mV
	I_F = 5A, T_J = 125°C			350	380	
	I_F = 10A, T_J = 25°C				520	
Reverse current (per diode)	V_R = V_{RRM} T_J = 25°C	I_R			0.5	mA
	V_R = V_{RRM} T_J = 125°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.

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■ Rating and characteristic curves

Fig. 1 - Forward Power Dissipation (per diode)

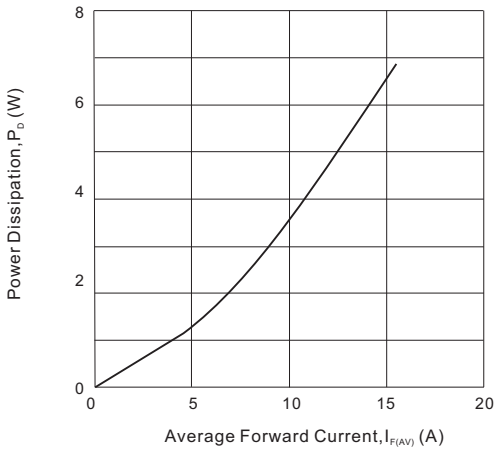


Fig. 2 - Instantaneous Forward Characteristics (per diode)

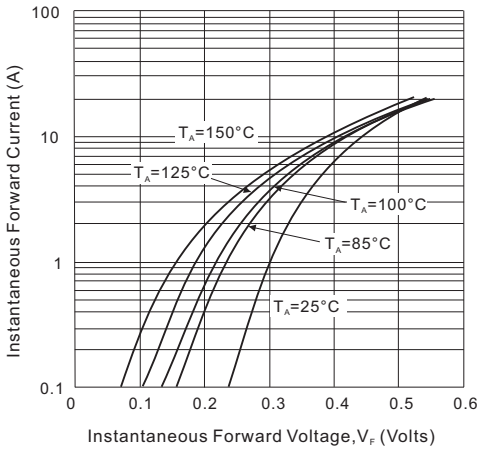


Fig. 3 - Reverse Characteristics (per diode)

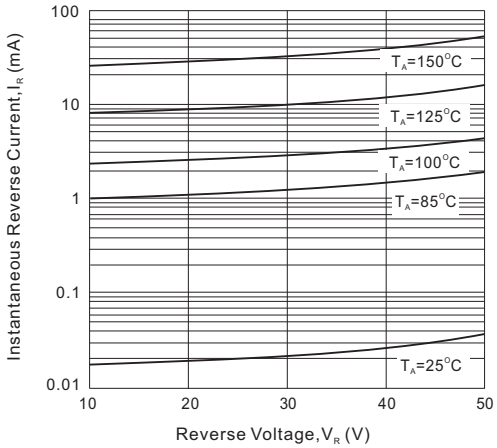
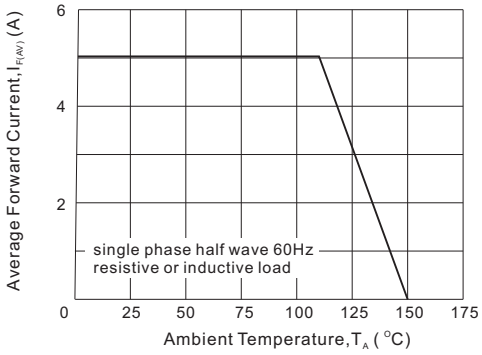


Fig.4 - Forward Current Derating Curve (per diode)



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