Main Product Characteristics

$I_{F(AV)}$	15A
V_{RRM}	50V
T_J	150°C
$V_{F(Typ)}$	0.41V

■ Features

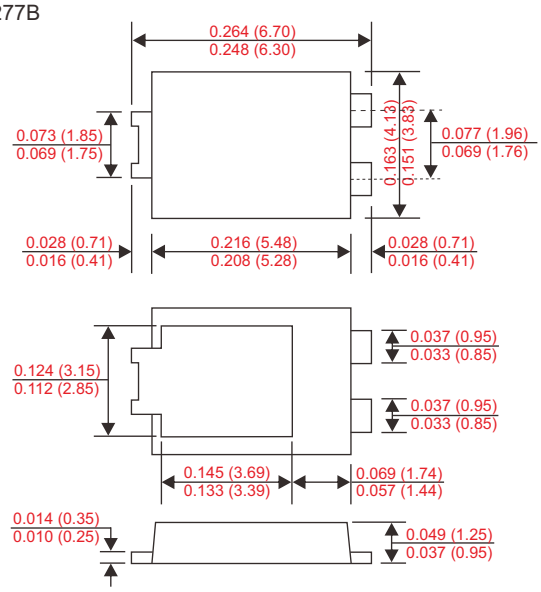
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Halogen-free part.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-277B.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Mounting Position : Any.
- Weight : Approximated 0.093 grams.

■ Outline

TO-277B



Dimensions in inches and (millimeters)

■ Circuit Diagram

■ 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	CP15M50SG	UNIT
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage	Ir =0.1mA, T_J = 25°C	V_{RRM} V_{RWM} V_{RM}	50	V
Forward rectified current		I_O	15	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	250	A
Thermal resistance	Junction to case	$R_{\theta JC}$	10	°C/W
	Junction to ambient	$R_{\theta JA}$	35	°C/W
Storage temperature		T_{STG}	-55 ~ +150	°C
Operating temperature		T_J	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	I_F = 5A, T_J = 25°C	V_F		410	450	mV
	I_F = 10A, T_J = 25°C			450	490	
	I_F = 15A, T_J = 25°C			485	530	
	I_F = 15A, T_J = 125°C			410		
Reverse current	V_R = V_{RRM} T_J = 25°C	I_R		0.02	0.06	mA
	V_R = V_{RRM} T_J = 125°C			15	60	

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■ Rating and characteristic curves

Fig. 1 - Instantaneous Forward Characteristics

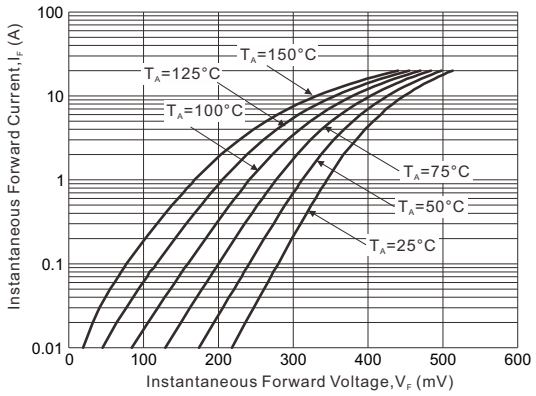


Fig. 2 - Reverse Characteristics

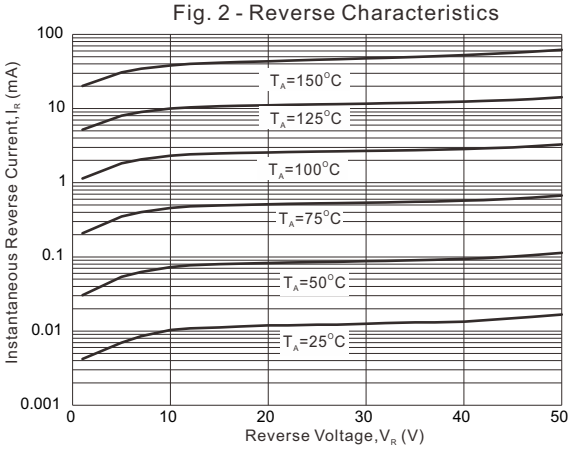


Fig. 3 - Forward Power Dissipation

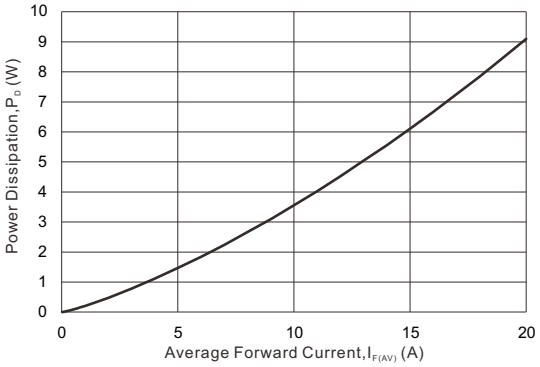


Fig.4 - Forward Current Derating Curve

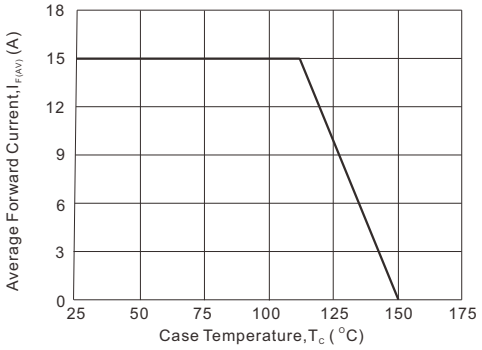
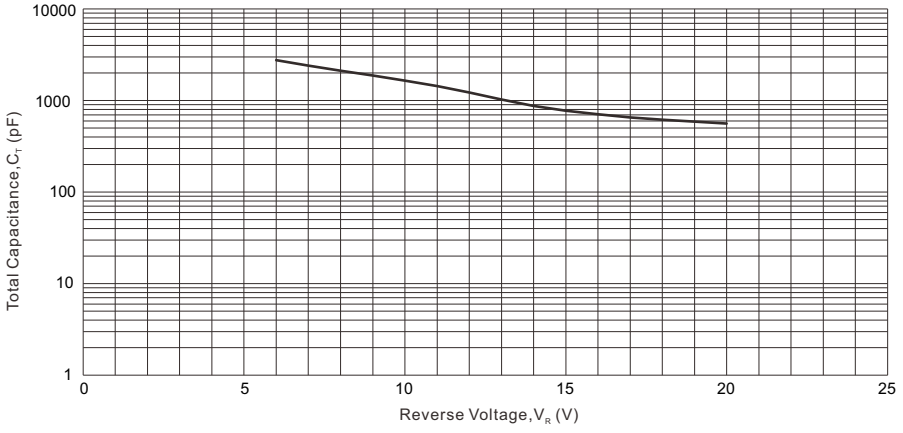


Fig. 5 - Total Capacitance VS. Reverse Voltage



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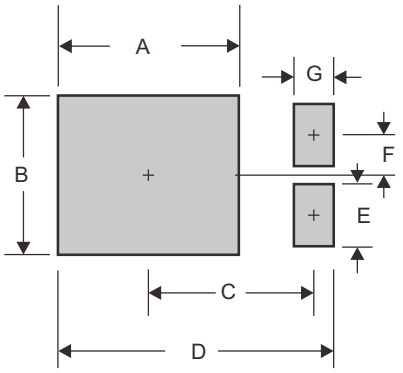
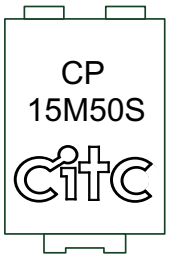
■ TO-277B foot print



■ Marking information



CP15M50S : Product type marking code

: CITC Logo

A	B	C	D	E	F	G
0.185 (4.70)	0.142 (3.60)	0.152 (3.87)	0.260 (6.60)	0.055 (1.40)	0.035 (0.90)	0.031 (0.80)

Dimensions in inches and (millimeters)

■ Ordering/Packing infirmation

Part number		Case	Q'TY/Reel (PCS)	Q'TY/Box (PCS)	Q'TY/Carton(PCS)
HF Halogen Free	CP15M50SG	TO-277B	5,000	10,000	40,000

Notes : 1. Halogen-Free product.

2. Halogen-Free defined follow IEC61249-2-21 ,

3. For packaging details, please reference our website at http://www.citcorp.com.tw/tchinese/products/index.php

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