

Main Product Characteristics

$I_{F(AV)}$	20A
V_{RRM}	45V
T_J	150°C
$V_{F(Typ)}$	0.47V

Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Lead free in compliance with EU RoHS.

Mechanical data

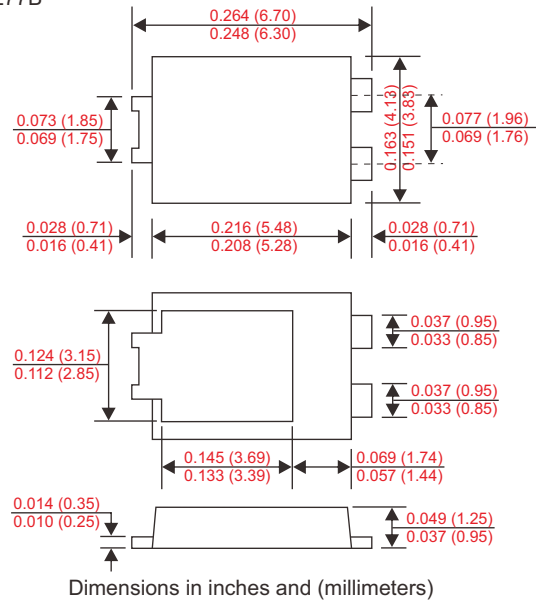
- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-277B.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.093 grams.

Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Outline

TO-277B



Circuit Diagram



Parameter	Conditions	Symbol	CTP20L45SG	UNIT
Working peak reverse voltage		V_{RWM}	45	V
Forward rectified current		I_O	20	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	300	A
Peak repetitive reverse surge current	2us - 1kHz	I_{RRM}	2	A
Typical Thermal resistance	Junction to case	R_{BJC}	4	°C/W
	Junction to ambient	R_{BJA}	60	°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	$I_F = 3A, T_J = 25^\circ C$	V_F		420		mV
	$I_F = 20A, T_J = 25^\circ C$			530	580	
	$I_F = 20A, T_J = 125^\circ C$			470		
Reverse current	$V_R = 45V, T_J = 25^\circ C$	I_R		0.015	0.1	mA
	$V_R = 45V, T_J = 125^\circ C$			3	50	
Reverse Breakdown Voltage	$I_R = 0.1mA, T_J = 25^\circ C$	V_{BR}	45			V

Rating and characteristic curves

Fig. 1 - Forward Characteristics

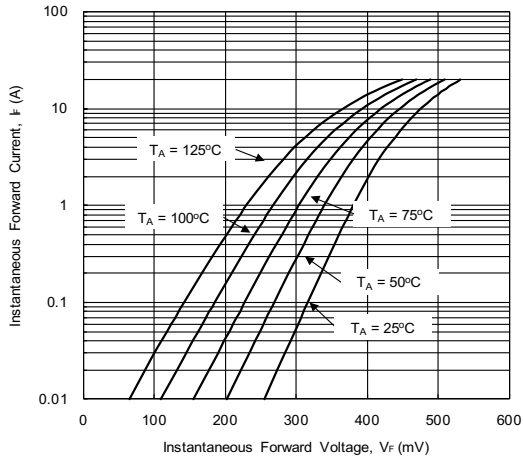


Fig. 2 - Reverse Characteristics

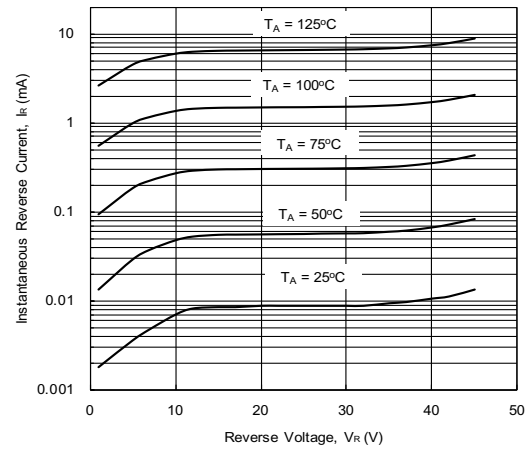


Fig. 3 - Forward Power Dissipation

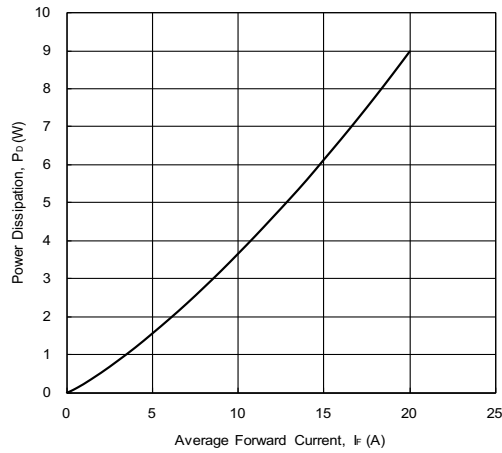


Fig. 4 - Forward Current Derating Curve

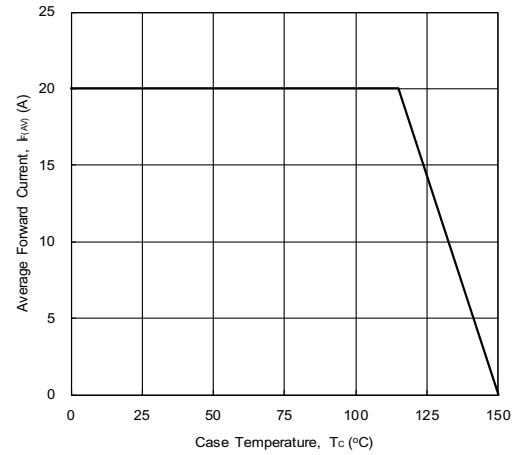
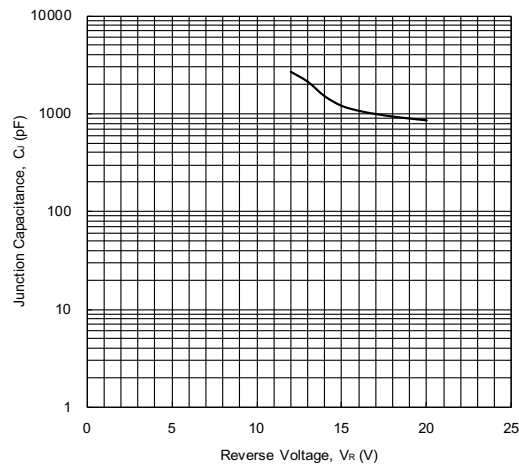
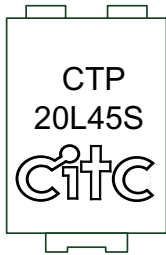


Fig. 5 - Junction Capacitance



■ Marking information



CTP20L45S: Product type marking code

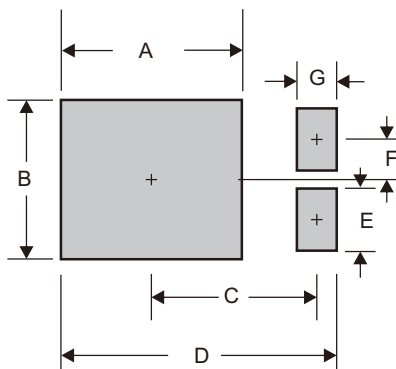
: CITC Logo

■ Ordering/Packing information

	Part number	Case	Q'TY/Reel (PCS)	Q'TY/Box (PCS)	Q'TY/Carton(PCS)
Halogen free	CTP20L45SG	TO-277B	5,000	10,000	40,000

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

■ TO-277B foot print



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)

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