

Main Product Characteristics

$I_{F(AV)}$	20A
V_{RRM}	60V
T_J	150°C
$V_{F(Typ)}$	0.455V

■Features

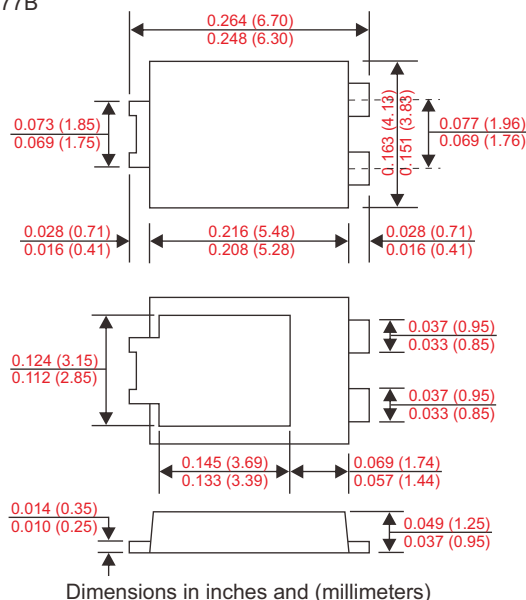
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Halogen-free part.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■Mechanical date

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

■Outline

TO-277B



■Circuit Diagram



■ Maximum Ratings

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Conditions	Symbol	CP20S60SG	UNIT
Working Peak Reverse Voltage		V_{RWM}	60	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}	320	A
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
Junction Temperature		T_J	-55 ~ +150	°C

■ Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward Voltage Drop	$I_F = 2A, T_J = 25^\circ C$	V_F		365	420	mV
	$I_F = 10A, T_J = 25^\circ C$			440	500	
	$I_F = 20A, T_J = 25^\circ C$			500	560	
	$I_F = 20A, T_J = 125^\circ C$			455		
Reverse Current	$V_R = V_{RRM}, T_J = 25^\circ C$	I_R		0.015	0.1	mA
	$V_R = V_{RRM}, T_J = 100^\circ C$				15	
Reverse Breakdown Voltage	$I_R = 0.1mA$	V_{BR}	60			V

■ Rating and characteristic curves

Fig. 1 - Forward Characteristics

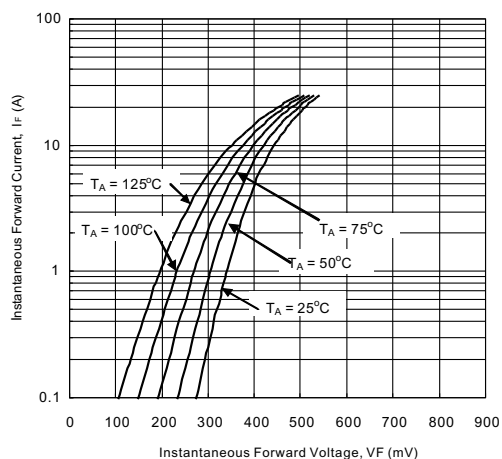


Fig. 2 - Reverse Characteristics

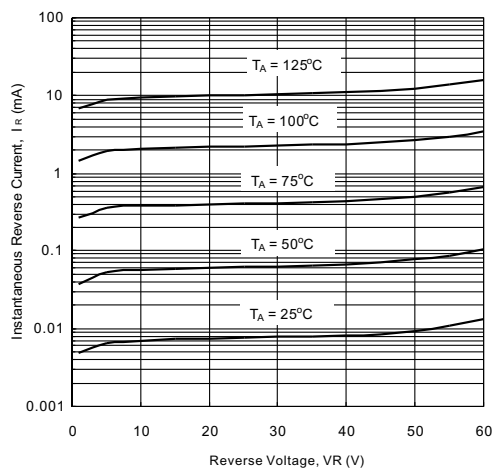


Fig. 3 - Forward Power Dissipation

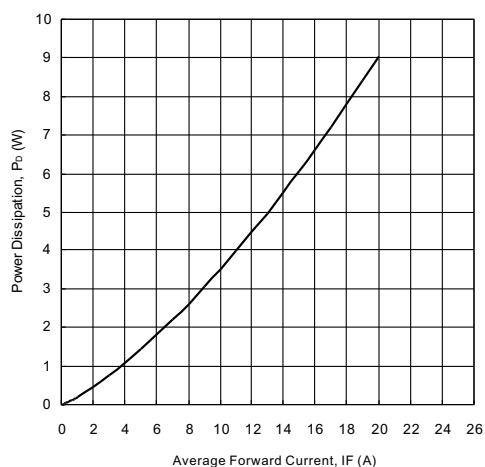


Fig. 4 - Forward Current Derating Curve

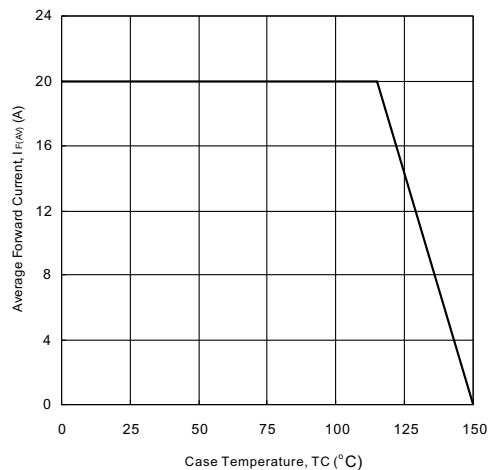
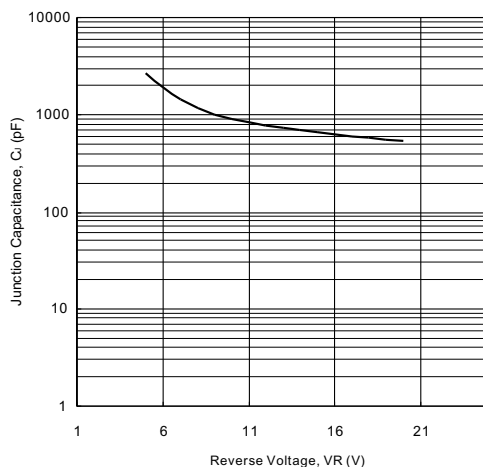
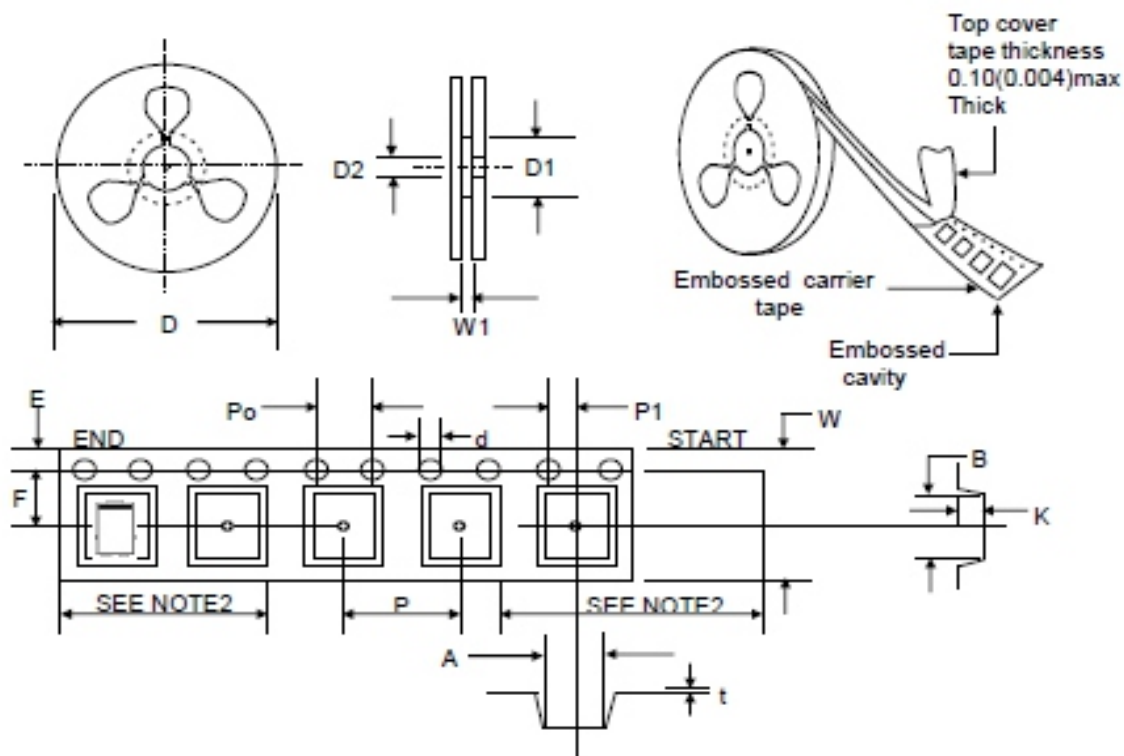


Fig. 5 - Junction Capacitance

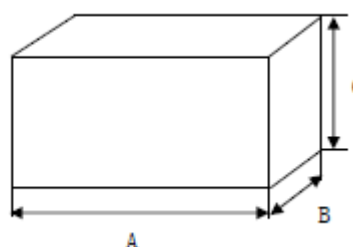
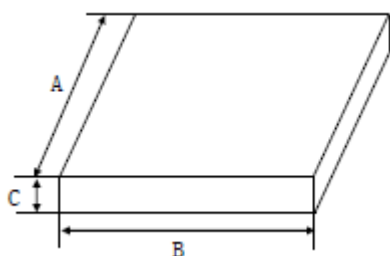


■ Standard package of TO-277B series



■ LOCKET

■ CARTON

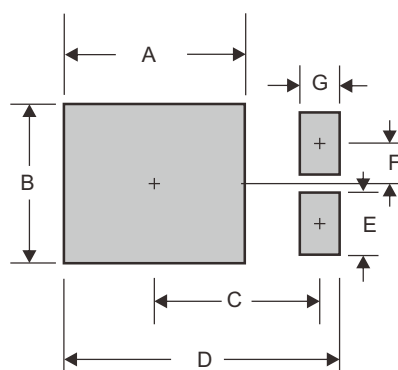


Unit:mm

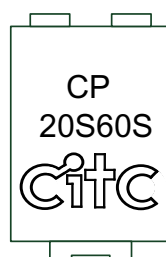
P/N	DIMENSIO N"A"	DIMENSIO N"B"	DIMENSIO N"C"	DIMENSIO N"d"	DIMENSIO N"D"	DIMENSIO N"D1"	DIMENSIO N"D2"	DIMENSIO N"E"	DIMENSIO N"F"
BREDE	5.2	6.7	-	1.55	-	-	-	1.75	5.5
REEL	-	-	-	-	330	50	13	-	-
LOCKET	360	340	45	-	-	-	-	-	-
CARTON	380	365	400	-	-	-	-	-	-

P/N	DIMENSIO N"K"	DIMENSIO N"P"	DIMENSIO N"Po"	DIMENSIO N"P1"	DIMENSIO N"t"	DIMENSIO N"W"	DIMENSIO N"W1"	Q'TYPER	REMARK
BREDE	1.55	8	4	2	0.23	12	-	-	-
REEL	-	-	-	-	-	-	12~14.4	5	
LOCKET	-	-	-	-	-	-	-	10	2 REEL
CARTON	-	-	-	-	-	-	-	80	8 LOCKET

■TO-277B foot print



■Marking information



CP20S60S: 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 information

Part number	Case	Q'TY/Reel (PCS)	Q'TY/Box (PCS)	Q'TY/Carton(PCS)
 CP20S60SG	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>

- CITC reserves the right to make changes to this document and its products and specifications at any time without notice.
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- CITC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does CITC assume any liability for application assistance or customer product design.
- CITC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
- No license is granted by implication or otherwise under any intellectual property rights of CITC.
- CITC products are not authorized for use as critical components in life support devices or systems without express written approval of CITC.