

### Main Product Characteristics

$I_{F(AV)}$	2x10A
$V_{RRM}$	45V
$T_J$	150°C
$V_{(Typ)}$	0.39V

### Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CSF20S45CTG-A.
- Lead free in compliance with EU RoHS.

### Mechanical data

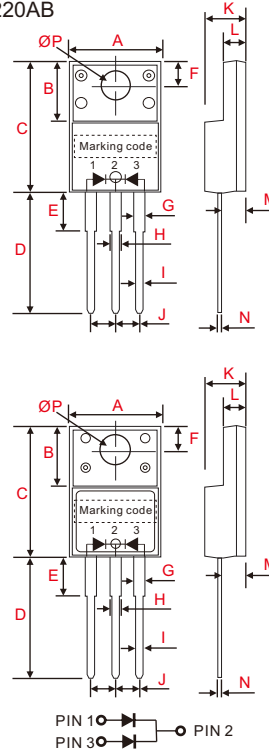
- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC ITO-220AB molded plastic body.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity : As marked.
- Mounting Position : Any.
- Weight : Approximated 2.25 gram.

### Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

### Outline

ITO-220AB



symbol	Dimensions in inches(millimeters)	
	Min	Max
A	0.390(9.9)	0.408(10.36)
B	0.268(6.8)	0.283(7.2)
C	0.583(14.8)	0.598(15.2)
D	0.512(13.0)	0.543(13.8)
E	0.102(2.6)	0.150(3.8)
F	0.101(2.55)	0.112(2.85)
G	0.043(1.1)	0.053(1.35)
H	0.043(1.1)	0.053(1.35)
I	0.020(0.5)	0.028(0.7)
J	0.098(2.49)	0.102(2.59)
K	0.169(4.3)	0.185(4.7)
L	0.112(2.85)	0.128(3.25)
M	0.098(2.5)	0.114(2.9)
N	0.020(0.5)	0.028(0.7)
ØP	0.130(3.3)	0.134(3.5)

### Alternate

symbol	Dimensions in inches(millimeters)	
	Min	Max
A	0.390(9.9)	0.398(10.1)
B	0.264(6.7)	0.272(6.9)
C	0.587(14.9)	0.595(15.1)
D	0.492(12.5)	0.532(13.5)
E	0.142(3.4)	0.150(3.8)
F	0.098(2.5)	0.118(3.0)
G	0.043(1.1)	0.055(1.4)
H	0.043(1.1)	0.055(1.4)
I	0.020(0.5)	0.030(0.75)
J	0.095(2.42)	0.105(2.66)
K	0.173(4.4)	0.181(4.6)
L	0.102(2.6)	0.110(2.8)
M	0.097(2.45)	0.100(2.55)
N	0.020(0.5)	0.028(0.7)
ØP	0.134(3.4)	0.142(3.6)

Parameter	Conditions	Symbol	CSF20S45CT-A	UNIT
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)	$I_{FSM}$	300	A
Peak repetitive reverse surge current (per diode)	2us - 1kHz	$I_{RRM}$	2	A
Typical Thermal resistance (per leg)	Junction to case	$R_{\theta JC}$	8	°C/W
	Junction to ambient	$R_{\theta JA}$	50	°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)	$I_F = 3A, T_J = 25^\circ C$	$V_F$		335		mV
	$I_F = 10A, T_J = 25^\circ C$			430	460	
	$I_F = 10A, T_J = 125^\circ C$			390		
Reverse current (per diode)	$V_R = V_{RRM}, T_J = 25^\circ C$	$I_R$		0.1	0.4	mA
	$V_R = V_{RRM}, T_J = 125^\circ C$			30	100	
Reverse Breakdown Voltage (per diode)	$I_R = 0.5mA, T_J = 25^\circ C$	$V_{BR}$	45			V

Rating and characteristic curves

Fig. 1 - Forward Characteristics

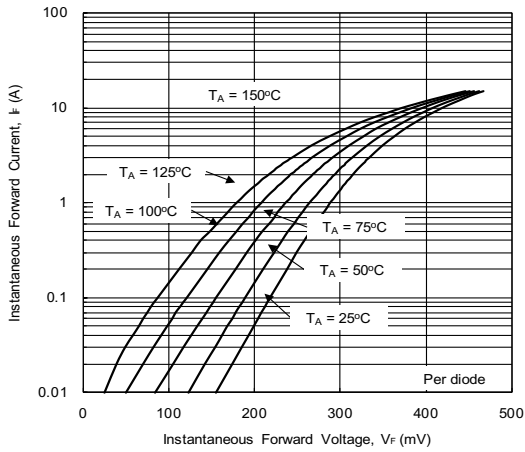


Fig. 2 - Reverse Characteristics

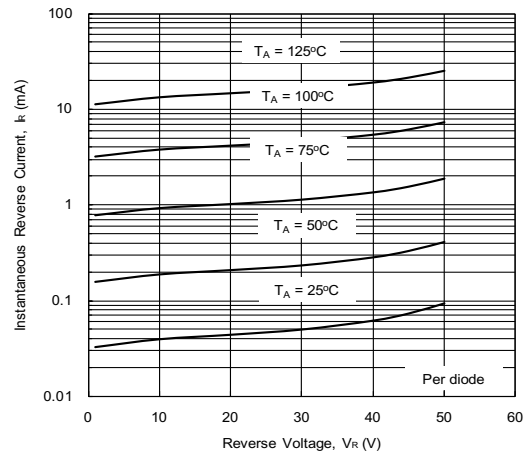


Fig. 3 - Forward Power Dissipation

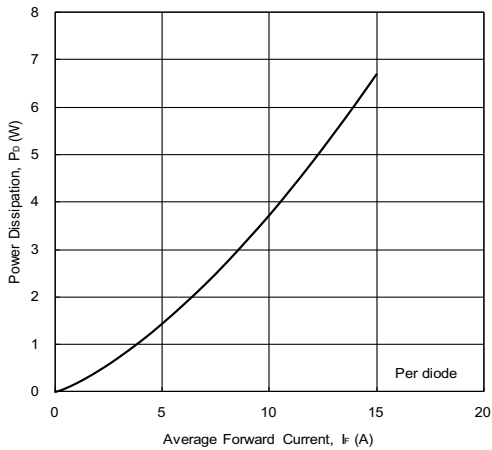


Fig. 4 - Forward Current Derating Curve

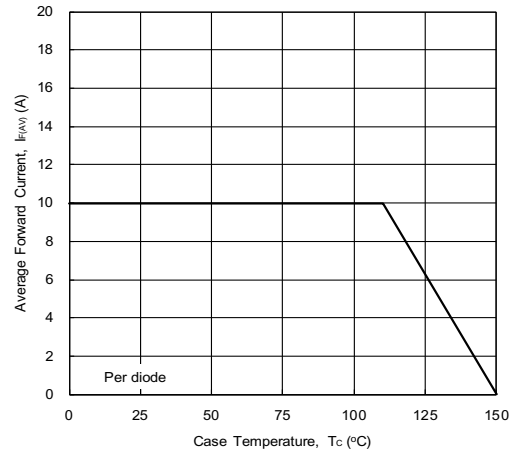
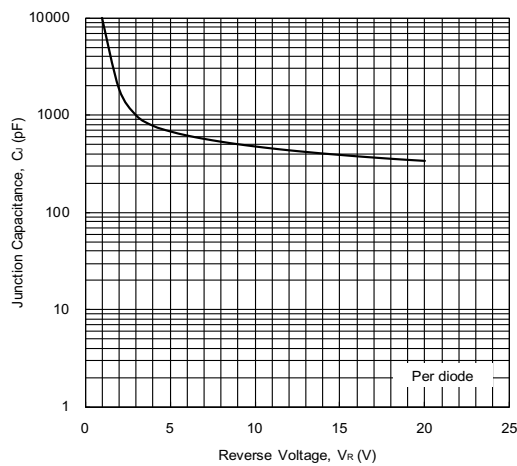
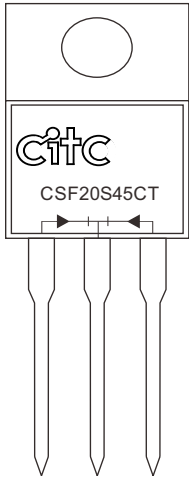



Fig. 5 - Junction Capacitance



■ Marking Information



CSF20S45CT : 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	CSF20S45CT-A	ITO-220AB	50	1000	5000
Halogen free	CSF20S45CTG-A				

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

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