CSF20L40CT-A / CSF20L45CT-A

Chip Integration Technology Corporation

Super Low Barrier High Voltage Power Rectifier

Main Product Characteristics

$I_{F(AV)}$	2x10A
V_{RRM}	40V/45V
T_J	150°C
$V_{(Typ)}$	0.42V

■ Features

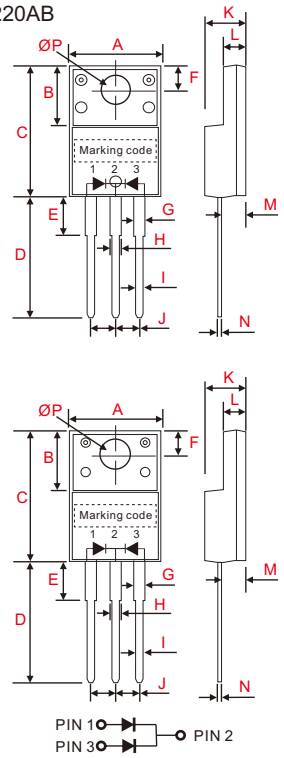
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex.CSF20L40CTG-A.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ 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.

■ 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	0.383(9.72)	0.404(10.27)
B	0.248(6.3)	0.272(6.9)
C	0.571(14.5)	0.610(15.5)
D	0.516(13.1)	0.547(13.9)
E	-	0.161(4.1)
F	0.094(2.4)	0.126(3.2)
G	0.039(1.0)	0.051(1.3)
H	0.039(1.0)	0.051(1.3)
I	0.020(0.5)	0.035(0.9)
J	0.095(2.41)	0.105(2.67)
K	0.169(4.3)	0.189(4.8)
L	0.055(1.4)	0.122(3.1)
M	0.091(2.3)	0.117(2.96)
N	0.014(0.35)	0.031(0.8)
ØP	0.122(3.1)	0.142(3.6)

■ 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	CSF20L40CT-A	CSF20L45CT-A	UNIT
Marking code			CSF20L40CT	CSF20L45CT	
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_{RM}	40	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}	250		A
Peak repetitive reverse surge current (per diode)	2us - 1kHz	I_{RRM}	3		A
Thermal resistance(1)	Junction to case	$R_{\theta JC}$	15		°C/W
Operating and Storage temperature		T_J, T_{STG}	-55 ~ +150		°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop (per diode)	I_F = 10A, T_J = 25°C	V_F			500	mV
	I_F = 10A, T_J = 125°C			420	470	
	I_F = 20A, T_J = 25°C				600	
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 - Instantaneous Forward Characteristics (per diode)

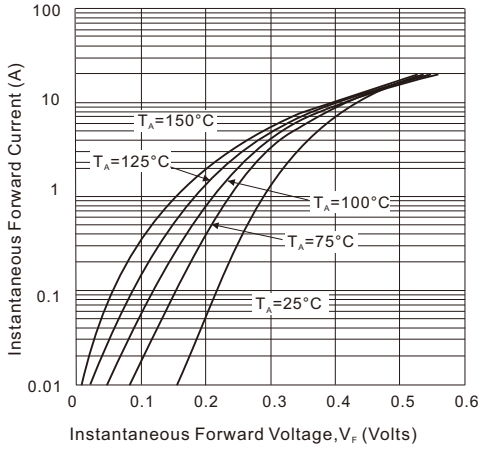


Fig.2 - Forward Current Derating Curve (per diode)

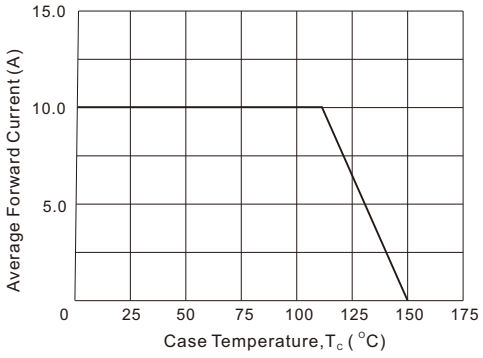
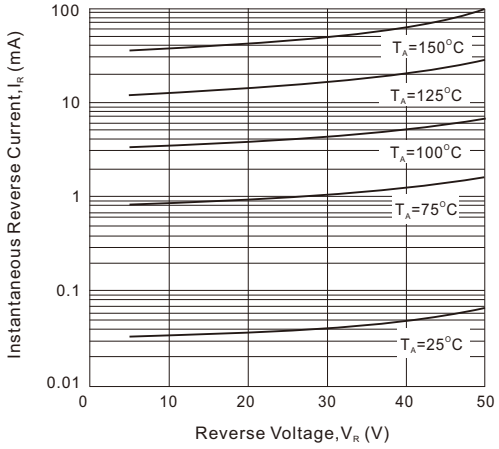


Fig. 3 - Reverse Characteristics (per diode)



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