

Standard Rectifier

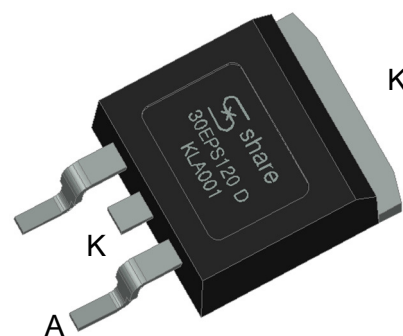
Features / Advantages:

- GPP Glass passivated chips
- Very low leakage current
- Very low forward voltage drop
- Ultra low conduction losses
- Improved thermal behaviour
- RoHS compliant
- Epoxy meets UL 94V-0
- Package: Optimized D²PAK

$$V_{RRM} = 1200V$$

$$IF_{AV} = 30A$$

$$V_F (typ.) = 0.95V$$



Part number

30EPS120 D



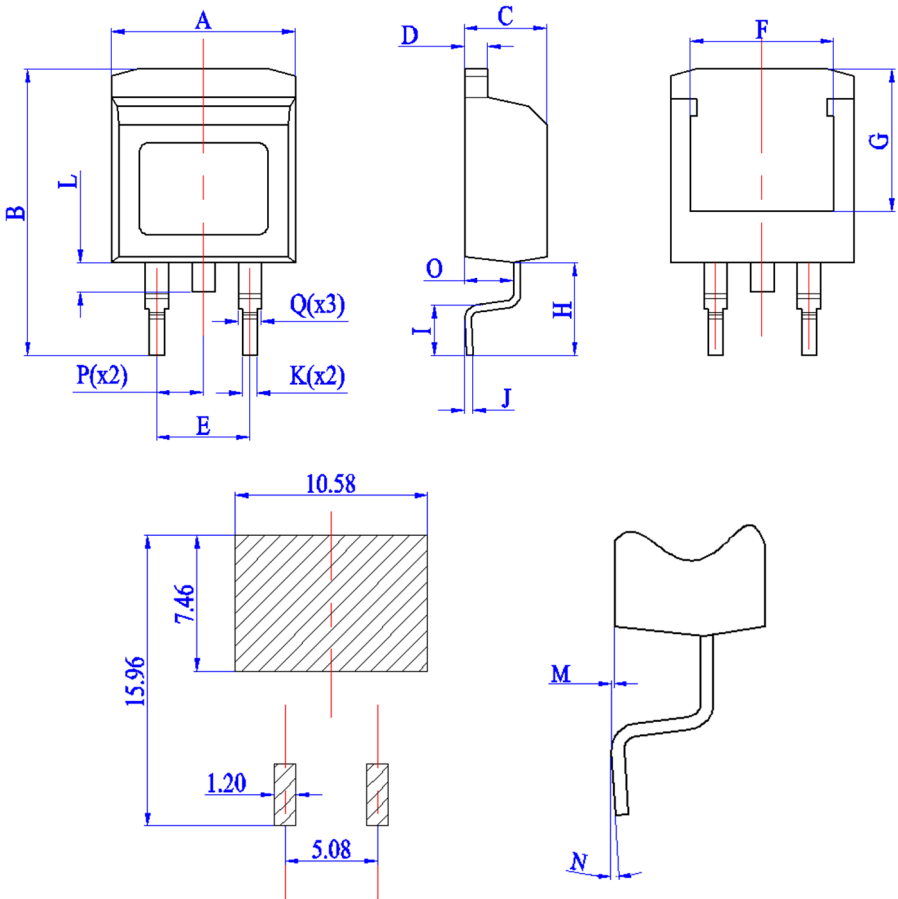
Circuit diagram

Rectifier				Ratings			
Symbol	Definition	Conditions		min.	typ.	max.	Unit
V_{RSM}	max. non-repetitive reverse blocking voltage	$T_{VJ} = 25^{\circ}\text{C}$				1300	V
V_{RRM}	max. repetitive reverse blocking voltage	$T_{VJ} = 25^{\circ}\text{C}$				1200	V
I_R	reverse current	$V_R = 1200\text{V}$	$T_{VJ} = 25^{\circ}\text{C}$			40	μA
		$V_R = 1200\text{V}$	$T_{VJ} = 150^{\circ}\text{C}$			1.5	mA
V_F	forward voltage drop	$I_F = 30\text{A}$	$T_{VJ} = 25^{\circ}\text{C}$		1.05	1.30	V
		$I_F = 30\text{A}$	$T_{VJ} = 150^{\circ}\text{C}$		0.95	1.20	V
I_{FAV}	average forward current	$T_C = 130^{\circ}\text{C}$ 180° sine	$T_{VJ} = 175^{\circ}\text{C}$			30	A
V_{F0}	threshold voltage	for power loss calculation only		$T_{VJ} = 175^{\circ}\text{C}$		0.82	V
r_F	slope resistance					14.1	m Ω
R_{thJC}	thermal resistance junction to case					0.90	K/W
R_{thCH}	thermal resistance case to heatsink				0.25		K/W
P_{tot}	total power dissipation	$T_C = 25^{\circ}\text{C}$				160	W
I_{FSM}	max. forward surge current	$t = 10\text{ ms; (50 Hz), sine}$	$T_{VJ} = 25^{\circ}\text{C}$			300	A
		$t = 8,3\text{ ms; (60 Hz), sine}$	$V_R = 0\text{ V}$			325	A
		$t = 10\text{ ms; (50 Hz), sine}$	$T_{VJ} = 150^{\circ}\text{C}$			255	A
		$t = 8,3\text{ ms; (60 Hz), sine}$	$V_R = 0\text{ V}$			275	A
I^2t	value for fusing	$t = 10\text{ ms; (50 Hz), sine}$	$T_{VJ} = 25^{\circ}\text{C}$			450	A ² S
		$t = 8,3\text{ ms; (60 Hz), sine}$	$V_R = 0\text{ V}$			440	A ² S
		$t = 10\text{ ms; (50 Hz), sine}$	$T_{VJ} = 150^{\circ}\text{C}$			325	A ² S
		$t = 8,3\text{ ms; (60 Hz), sine}$	$V_R = 0\text{ V}$			315	A ² S

Package To-263(D²PAK)

				Ratings			
Symbol	Definition	Conditions		min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal				35	A
T_{VJ}	virtual junction temperature			-40		175	$^{\circ}\text{C}$
T_{STG}	storage temperature			-40		150	$^{\circ}\text{C}$
Weight					1.6		g
F_c	mounting force with clip			20		60	N

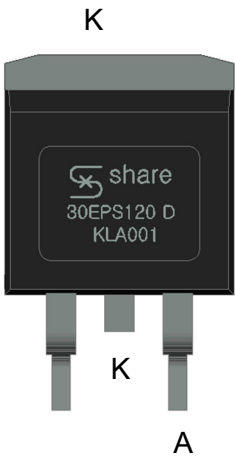
Outlines To-263(D²PAK)



Dim.	Millimeter	
	min	max
A	9.80	10.40
B	15.30	15.90
C	4.30	4.70
D	1.20	1.40
E	4.98	5.18
F	7.40	8.20
G	7.40	8.30
H	4.93	5.23
I	2.60	2.90
J	0.35	0.80
K	0.78	0.85
M	0.03	0.20
N	0°	8°
L	1.30	1.90
O	2.50	2.85
P	2.45	2.65
Q	1.15	1.40

Marking

- 1.  : LOGO.
- 2.30EPS120 D: Product model.
- 3.KLA001: Production serial number



Rating Characteristic

FIG.1 . Derating Curve For Output Rectified Current

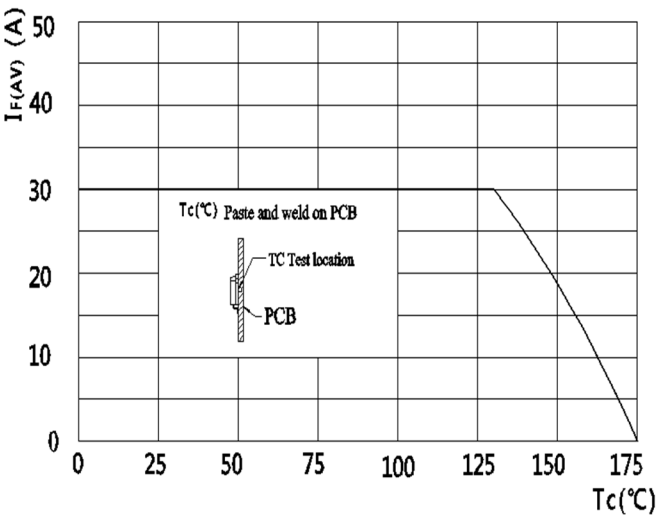


FIG.2 . Maximum Non-Repetitive Peak Orward Surge Current Per Bridge Element

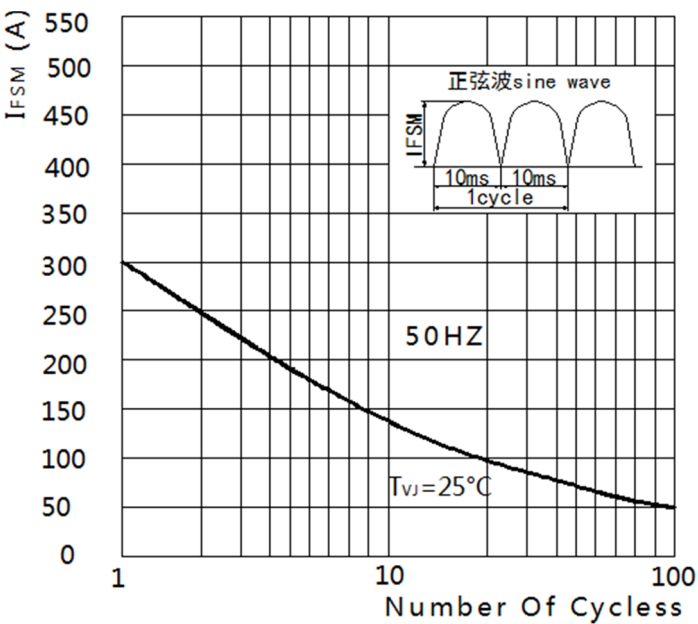


FIG3. Typical Reverse Characteristics Per Bridge Element

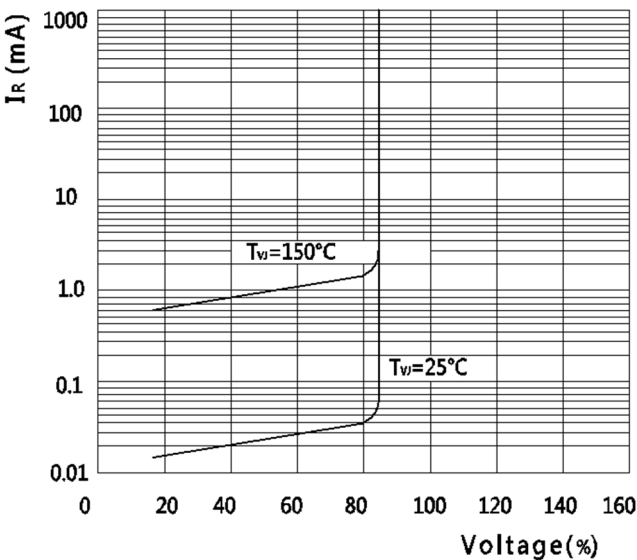


FIG4. Typical Forward Characteristics Per Bridge Element

