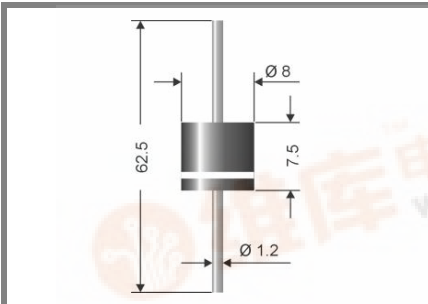


HE12F120



Axial lead diode

High efficiency fast silicon rectifier diode

HE12F120

Forward Current: 12 A

Reverse Voltage: 120 to 120 V

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0

Mechanical Data

- Plastic case 8 x 7,5 [mm]
- Weight approx.: 1,5 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo

- 1) Valid, if leads are kept at ambient temperature at a distance of 10 mm from case
- 2) $I_F = 5 \text{ A}$, $T_J = 25^\circ\text{C}$
- 3) $T_A = 25^\circ\text{C}$
- 4) Peak pulse power dissipation (10/1000 μs waveform) $T_A = 25^\circ\text{C}$ $P_{PPM} = 3000 \text{ W}$
- 5) Maximum admissible pulse current in reverse direction (10/1000 μs waveform) $I_{PPM} = 20 \text{ A}$

Type	Repetitive peak reverse voltage	Surge peak reverse voltage	Max. reverse recovery time	Max. forward voltage
	V_{RRM} V	V_{RSM} V	$I_F = 0,5 \text{ A}$ $I_R = 1 \text{ A}$ $I_{RR} = 0,25 \text{ A}$ t_{rr} ns	$V_F^{2)}$
HE12F120	120	120	300	0,82

Absolute Maximum Ratings

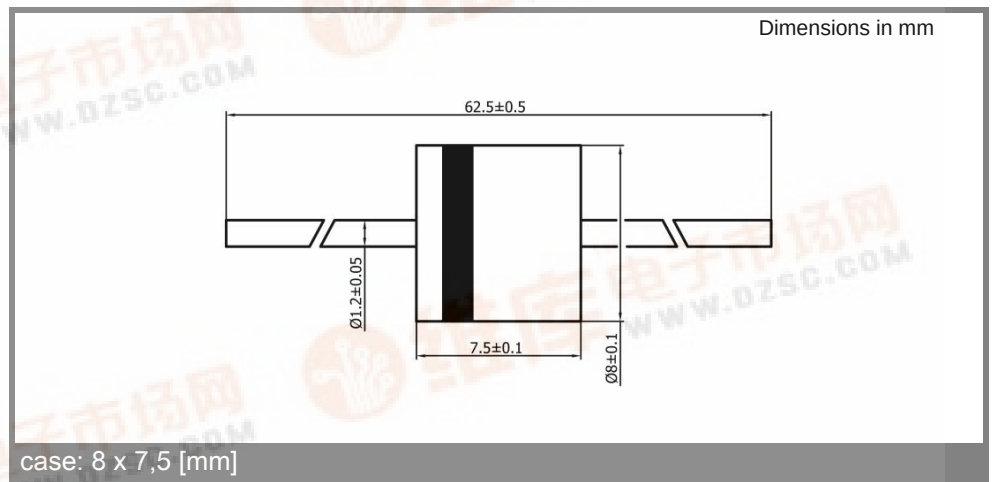
$T_c = 25^\circ\text{C}$, unless otherwise specified

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_A = 45^\circ\text{C}^{1)}$	12	A
I_{FRM}	Repetitive peak forward current $f > 15 \text{ Hz}^{1)}$	80	A
I_{FSM}	Peak forward surge current Hz half sinus-wave $^{3)}$	350	A
i^2t	Rating for fusing, $t < 10 \text{ ms}^{3)}$	680	A^2s
R_{thA}	Max. thermal resistance junction to ambient $^{1)}$	20	K/W
R_{thT}	Max. thermal resistance junction to terminals $^{1)}$	-	K/W
T_J	Operating junction temperature	-50...+175	$^\circ\text{C}$
T_s	Storage temperature	-50...+175	$^\circ\text{C}$

Characteristics

$T_c = 25^\circ\text{C}$, unless otherwise specified

Symbol	Conditions	Values	Units
I_R	Maximum leakage current, $T_J = 25^\circ\text{C}$; $V_R = V_{RRM}$	<5	μA
C_J	$T_J = ^\circ\text{C}$; $V_R = V_{RRM}$ Typical junction capacitance (at MHz and applied reverse voltage of V)	-	pF
Q_{rr}	Reverse recovery charge ($U_R = V$; $I_F = A$; $dI_F/dt = A/\text{ms}$)	-	μC
E_{RSM}	Non repetitive peak reverse avalanche energy ($I_R = \text{mA}$; $T_J = ^\circ\text{C}$; inductive load switched off)	-	mJ



HE12F120

