

DSEI2x161-06P

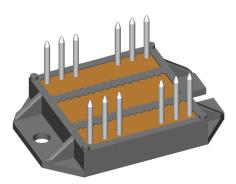
preliminary data

600 V 35 ns

 $I_{FAVM} = 2x 147 A$

Fast Recovery Epitaxial Diode (FRED)

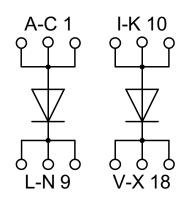
Part number DSEI2x161-06P



V_{RRM} =

=

t_



Features / Advantages:

- 2 independent FRED in 1 package
- Planar passivated chips
- Very short recovery time
- · Leads suitable for PC board soldering
- Very short recovery time
- · Soft recovery behaviour
- · Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- Low noise switching
- · Small and light weight

Applications:

- Antiparallel diode for high frequency switching devices
- Anti saturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power
- supplies (SMPS)
- · Inductive heating and melting
- Uninterruptible power supplies (UPS)
- · Ultrasonic cleaners and welders

Package: ECO-PAC2

- Isolation voltage: 3000 V~
- Industry standard outline
- RoHS compliant
- Soldering pins for PCB mounting
- Height: 9 mm
- Base plate: DCB ceramic
- Reduced weight
- Advanced power cycling

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IXYS reserves the right to change limits, conditions and dimensions.

Data according to IEC 60747and per semiconductor unless otherwise specified.



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Diode	Diode					Ratings			
Symbol	Definitions	Conditions		min.	typ.	max.			
	RMS forward current		$T_{VJ} = T_{VJM}$			270	A		
I _{FAVM} ①	max. average forward current	rectangular, d = 0.5	$T_{c} = 70^{\circ}C$			147	A		
I _{FSM}	max. surge forward current	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	$T_{VJ} = 45^{\circ}C$			1200 1300	A A		
		t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	$T_{VJ} = 150^{\circ}C$			1080 1170	A A		
l²t	Pt value for fusing	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	$T_{VJ} = 45^{\circ}C$			7200 7100	A²s A²s		
		t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	$T_{VJ} = 150^{\circ}C$			5800 5700	A²s A²s		
I _R	reverse current	$V_{R} = V_{RRM}$ $V_{R} = 0.8 \cdot V_{RRM}$ $V_{R} = 0.8 \cdot V_{RRM}$	$\begin{array}{l} T_{_{VJ}}=~25^\circ C\\ T_{_{VJ}}=~25^\circ C\\ T_{_{VJ}}=~125^\circ C \end{array}$			12 3 80	mA mA mA		
V _F	forward voltage	I _F = 200 A	$T_{vJ} = 25^{\circ}C$			1.45	V		
V _{то} r _т	threshold voltage slope resistance	for power-loss calculations only $T_{VJ} = T_{VJ}$				0.85 2.7	V mΩ		
R _{thJC} R _{thCH}	thermal resistance junction to case thermal resistance junction to heatsink				0.20	0.29	K/W K/W		
I _{RM}	max. reverse recovery current	$\begin{array}{l} I_{\rm F} = 100 \; \text{A}; \; -di_{\rm F}/dt = 200 \; \text{A}/\mu \text{s} \\ V_{\rm R} = 100 \; \text{V}; \; L \leq 0.05 \; \mu \text{H} \end{array} \qquad $			45		A		
t _{rr}	reverse recovery time	$I_{_{\rm F}}$ = 1 A; -di/dt = 400 A/µs; $V_{_{\rm R}}$ = 30 V	$T_{VJ} = 25^{\circ}C$		35		ns		

 $\oplus~$ I $_{_{FAVM}}$ rating includes reverse blocking losses at T $_{_{VJM}},$ V $_{_{R}}$ = 0.8 V $_{_{RRM}},$ duty cycle d = 0.5

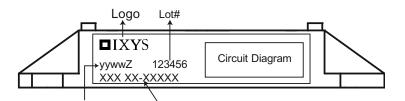
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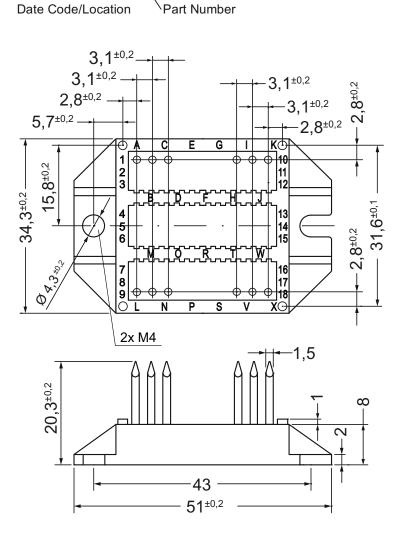


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Package	ECO-PAC2			Ratings			
Symbol	Definitions	Conditions		min.	typ.	max.	
IRMS	RMS current per terminal				100	A	
T _{vj} T _{op} T _{stg}	virtual junction temperature operation temperature storage temperature			-40 -40 -40		150 125 125	0° 0° 0°
Weight					24		g
M _D	mounting torque			1.4		2.0	Nm
d _{Spp/App} d _{Spb/Apb}	creepage distance on surface I striking distance through air terminal to terminal to backside		6.0 10.0			mm mm	
V _{ISOL}	isolation voltage	t = 1 second t = 1 minute 50/60 Hz, RM	S; I _{ISOL} ≤ 1 mA	3000 2500			V V





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