

Pb Free Plating Product

40EPU06



40Amperes,600Volts Switch Mode Single Fast Recovery Epitaxial Diode

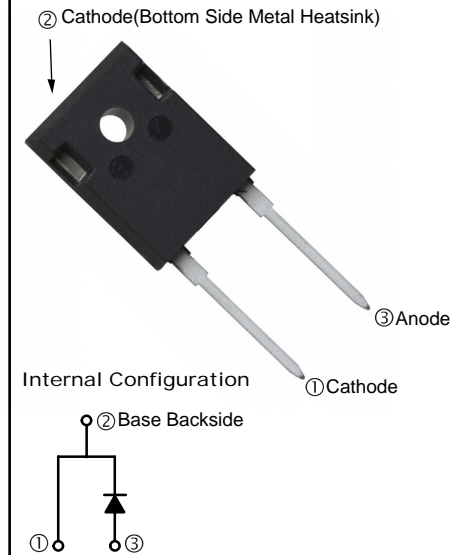
APPLICATION

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS

PRODUCT FEATURE

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

TO-247-2L/TO-247-2PIN(TO-247AC)



GENERAL DESCRIPTION

40EPU06 using the latest FRED FAB process(planar passivation pellet) with ultrafast and soft recovery characteristics.

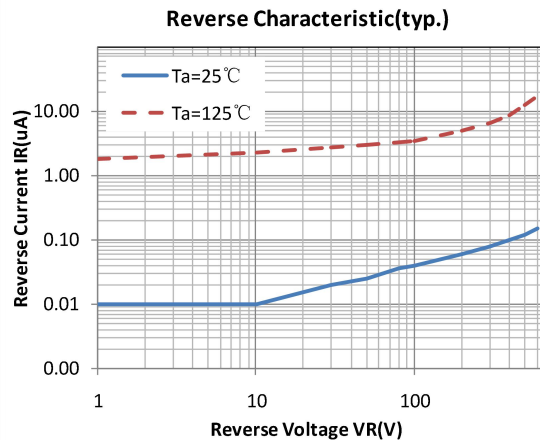
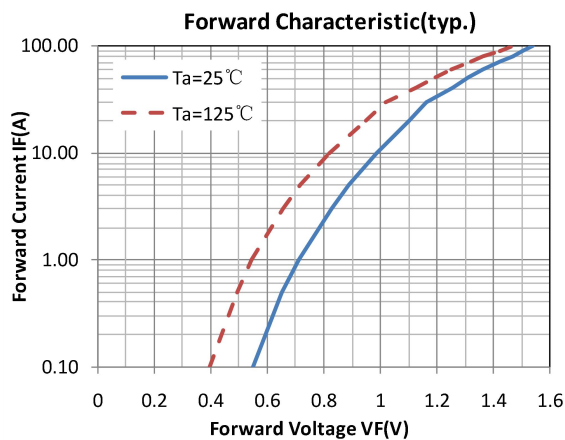
Absolute Maximum Ratings				
Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	V_{RRM}		600	V
Continuous forward current	$I_{F(AV)}$	$T_c = 110^\circ\text{C}$	40	A
Single pulse forward current	I_{FSM}	$T_c = 25^\circ\text{C}$	400	
Maximum repetitive forward current	I_{FRM}	Square wave, 20kHz	80	
Operating junction	T_j		175	$^\circ\text{C}$
Storage temperatures	T_{stg}		-55 to +175	$^\circ\text{C}$

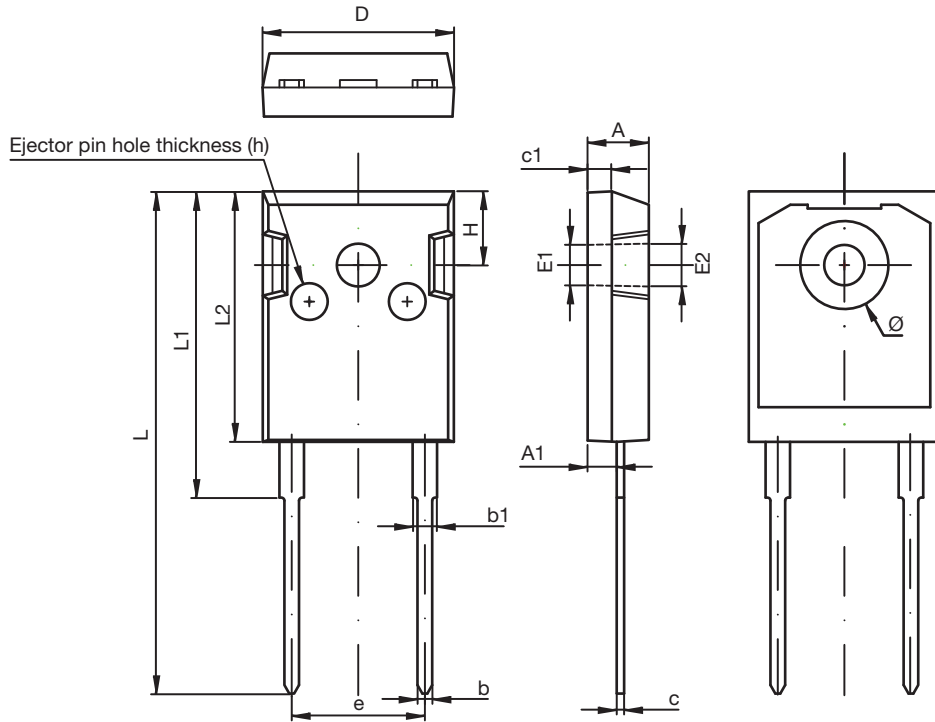
Electrical characteristics (Ta=25°C unless otherwise specified)						
Parameter	Symbol	Test Conditions	Min	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V_{BR} , V_R	$I_R=100\mu A$	600			V
Forward voltage	V_F	$I_F=40A$		1.45	1.80	
		$I_F=40A, T_j=125^\circ C$		1.20	1.60	
Reverse leakage current	I_R	$V_R=V_{RRM}$			30	μA
		$T_j=150^\circ C, V_R=600V$			300	
Reverse recovery time	t_{rr}	$I_F=0.5A, I_R=1A, I_{RR}=0.25A$		43	55	ns
		$I_F=1A, V_R=30V, di/dt=200A/us$		32	40	

Thermal characteristics

Parameter	Symbol	Typ	Units
Junction-to-Case	$R_{\theta JC}$	0.8	$^\circ C/W$

Electrical performance (typic)





TO-247-2L DIMENSIONS

SYMBOL	DIMENSIONS IN MILLIMETERS		DIMENSIONS IN INCHES	
	MIN.	MAX.	MIN.	MAX.
A	4.850	5.150	0.191	0.200
A1	2.200	2.600	0.087	0.102
b	1.000	1.400	0.039	0.055
b1	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.900	2.100	0.075	0.083
D	15.450	15.750	0.608	0.620
E1	3.500 Ref.		0.138 Ref.	
E2	3.600 Ref.		0.142 Ref.	
L	40.900	41.300	1.610	1.626
L1	24.800	25.100	0.976	0.988
L2	20.300	20.600	0.799	0.811
\emptyset	7.100	7.300	0.280	0.287
e	10.900 Typ.		0.429 Typ.	
H	5.980 Typ.		0.235 Typ.	
h	0.000	0.300	0.000	0.012