Pb Free Plating Product

30ETU06

30.0 Amperes,600Volts SwitchMode Single Fast Recovery Epitaxial Diode

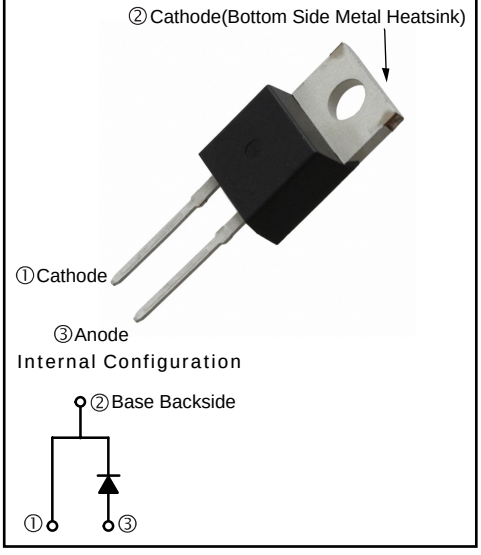
APPLICATION

- 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-220AC/TO-220CB-2P(TO-220C-2L)



GENERAL DESCRIPTION

30ETU06 using the lastest 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	$I_{F(AV)}$	Tc =110°C	30	A
Single pulse forward current	I_{FSM}	Tc =25°C	240	
Maximum repetitive forward current	I_{FRM}	Square wave, 20kHZ	60	
Operating junction	Tj		175	°C
Storage temperatures	Tstg		-55 to +175	°C

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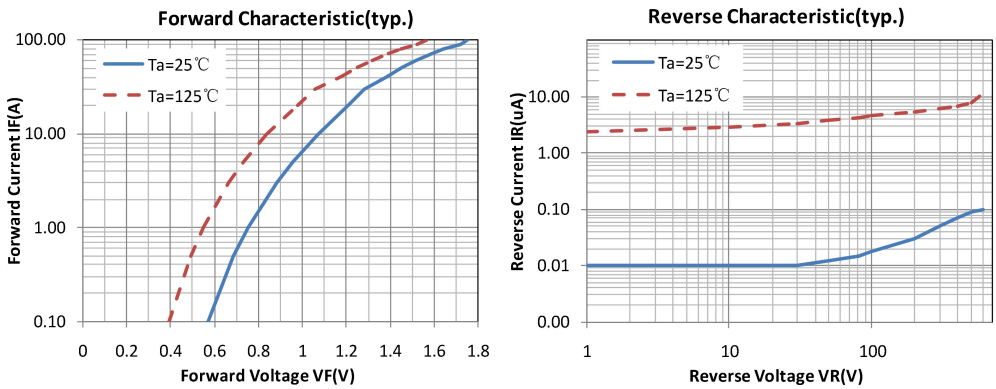
Electrical characteristics (Ta=25°C unless otherwise specified)						
Parameter	**Symbol**	**Test Conditions**	**Min**	**Typ.**	**Max.**	**Units**
Breakdown voltage Blocking voltage	V_{BR}, V_R	I_R=100μA	600			V
Forward voltage (Per Diode)	V_F	I_F=30A		1.30	1.60	
		I_F=30A, Tj =125°C		1.05	1.40	
Reverse leakage current(Per Diode)	I_R	V_R= V_{RRM}			20	μA
		Tj=150°C, V_R=600V			200	
Reverse recovery time(Per Diode)	t_{rr}	I_F=0.5A, I_R=1A, I_{RR}=0.25A		38	50	ns
		I_F=1A,V_R=30V, di/*dt* =200A/us		28	35	

Thermal characteristics

Paramter	**Symbol**	Typ	Units
Junction-to-Case	$R_{\theta JC}$	**1.50**	℃/W

Electrical performance (typic)



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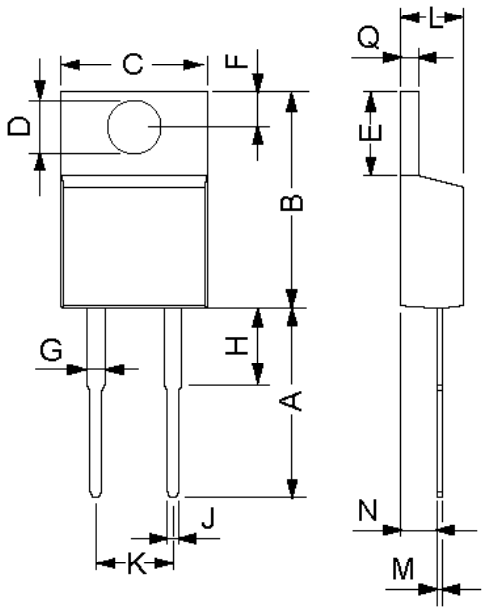
Dimensions TO-220AC



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	12.7	14.73	0.5	0.58
B	14.23	16.51	0.56	0.65
C	9.66	10.66	0.38	0.42
D	3.54	4.08	0.139	0.161
E	5.85	6.85	2.3	0.42
F	2.54	3.42	0.1	0.135
G	1.15	1.77	0.045	0.07
H	-	6.35	-	0.25
J	0.64	0.89	0.025	0.035
K	4.83	5.33	0.19	0.21
L	3.56	4.82	0.14	0.19
M	0.51	0.76	0.02	0.03
N	2.04	2.49	0.08	0.115
Q	0.64	1.39	0.025	0.055

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