



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

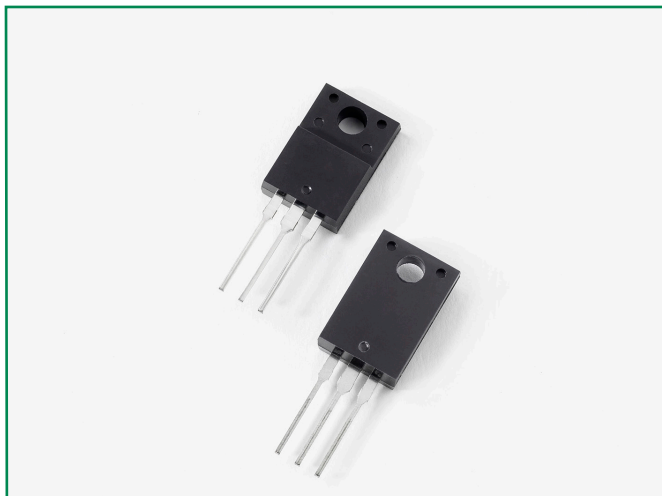
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# Ultrafast Recovery Rectifier

DURF3060CT, 2x 15A, 600V, ITO-220AB, Common Cathode

DURF3060CT



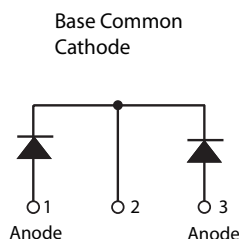
## Description

Littelfuse DUR series Ultrafast Recovery Rectifier is designed to meet the general requirements of commercial applications by providing low  $T_{rr}$ , high-temperature, low-leakage and low forward voltage drop products. It is suitable for output rectifier, free-wheeling or boost diode in high-frequency power switching application such as switch mode power supply and DC-DC converters.

## Features

- Ultra-fast switching
  - Low reverse leakage current
  - High surge current capability
  - Low forward voltage drop
  - Common Cathode
- configuration in electrically isolated ITO-220AB package
- Pb-free E3 means 2nd level interconnect is Pb-free and the terminal finish material is tin(Sn) (IPC/JEDEC J-STD-609A.01)

## Circuit Diagram



## Applications

- Output rectifiers in switch mode power supplies (SMPS) and DC to DC converters
- Free-wheeling diode or boost diode in converters and motor control circuits
- Anti-parallel diode for high frequency switching devices such as IGBT
- Uninterruptible Power Supplies (UPS)
- Inductive heating and melting
- Ultrasonic cleaners and welders

## Maximum Ratings

Characteristics	Symbol	Conditions	Max.	Unit
Peak Inverse Voltage	$V_{RWM}$	-	600	V
Average Rectified Forward Current	$I_{F(AV)}$	Rated $V_r$ @ $T_c = 105^\circ\text{C}$ , rectangular wave form	15 ( Per Leg)	A
			30 ( Total Device)	
Peak One Cycle Non-Repetitive Surge Current ( Per Leg)	$I_{FSM}$	8.3 ms, half sine pulse	110	A

## Electrical Characteristics

Characteristics	Symbol	Conditions	Typ.	Max.	Unit
Forward Voltage Drop ( Per Leg) <sup>1</sup>	$V_{F1}$	@15A, Pulse, $T_J = 25^\circ\text{C}$	1.71	2.03	V
	$V_{F2}$	@15A, Pulse, $T_J = 125^\circ\text{C}$	1.59	-	V
Reverse Current (Per Leg) <sup>1</sup>	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , $T_J = 25^\circ\text{C}$	0.54	100	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , $T_J = 125^\circ\text{C}$	277	1500	$\mu\text{A}$
Reverse Recovery Time	$t_{rr1}$	$I_F = 500\text{mA}$ , $I_R = 1\text{A}$ , and $I_{rm} = 250\text{mA}$	-	50	ns

Footnote 1: Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

### Thermal-Mechanical Specifications

Characteristics	Symbol	Conditions	Specification	Unit
Junction Temperature	$T_J$	-	-55 to +150	°C
Storage Temperature	$T_{stg}$	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	1.6	°C/W
Approximate Weight	wt	-	2.0	g
Case Style	-	ITO-220AB	-	-

Figure 1: Typical Forward Characteristics

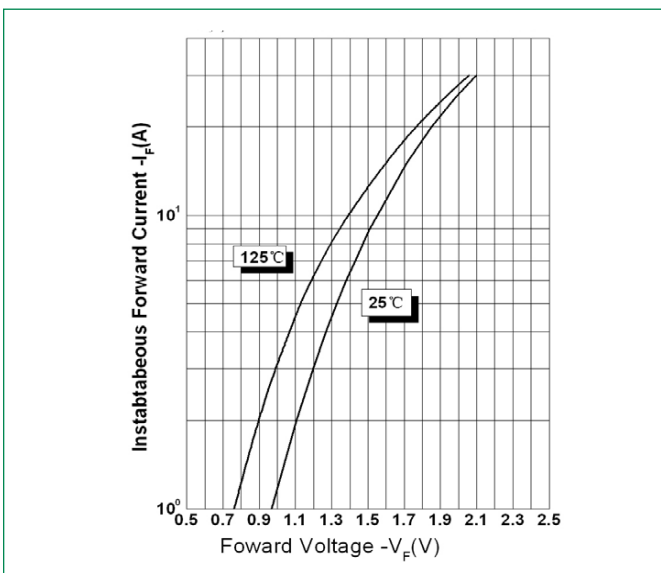


Figure 2: Typical Reverse Characteristics

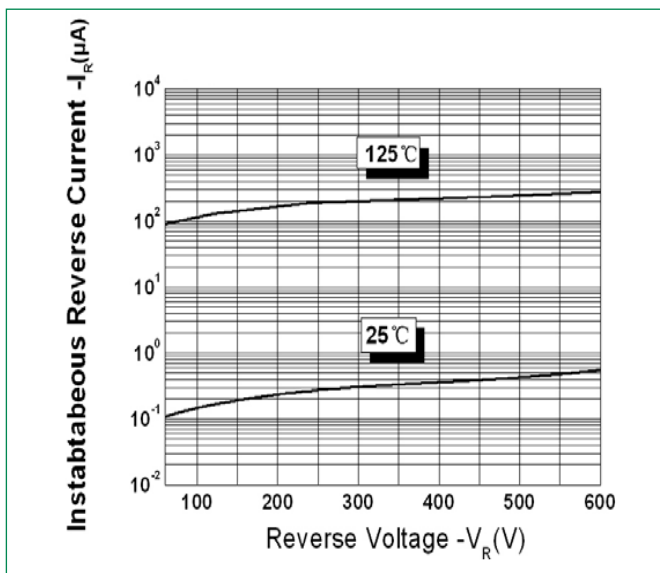
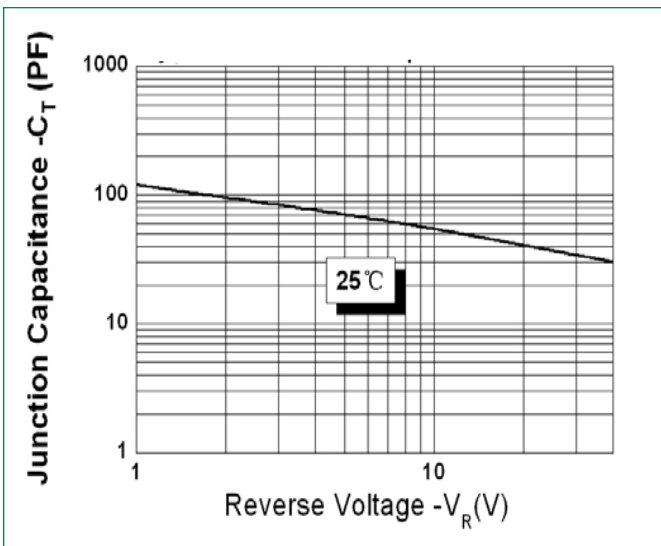
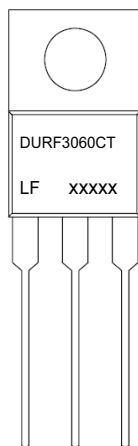


Figure 3: Typical Junction Capacitance



Part Numbering and Marking System



\*xxxxx is YYWWL

- DUR = Device Type
- F = Package type
- 30 = Forward Current (30A)
- 60 = Reverse Voltage (600V)
- CT = Configuration
- LF = Littelfuse
- YY = Year
- WW = Week
- L = Lot Number



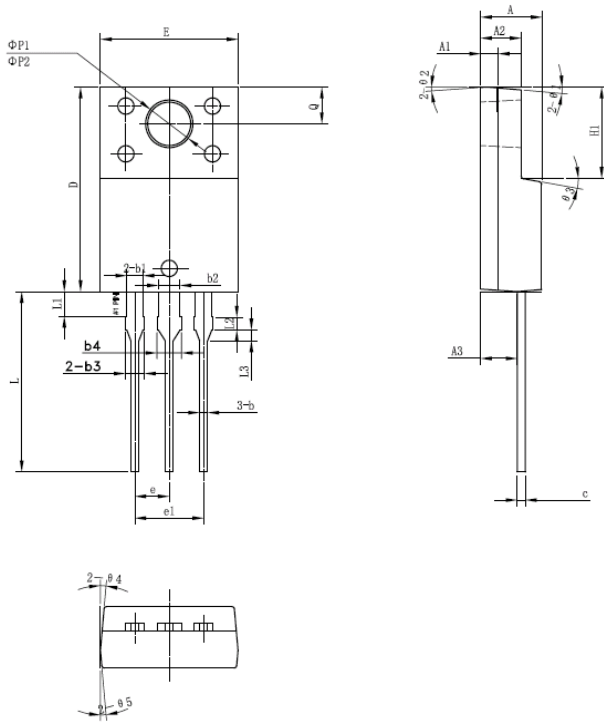
# Ultrafast Recovery Rectifier

DURF3060CT, 2x 15A, 600V, ITO-220AB, Common Cathode

## Packing Options

Part Number	Marking	Packing Mode	M.O.Q
DURF3060CT	DURF3060CT	50pcs /Tube	1000

## Dimensions-Package ITO-220AB



Symbol	Millimeters		
	Min	Typ	Max
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
øP1	3.30	3.50	3.70
øP2	2.99	3.19	3.39
Q	2.50	2.70	2.90
θ1		5°	
θ2		4°	
θ3		10°	
θ4		5°	
θ5		5°	

## Tube Specification ITO-220AB

