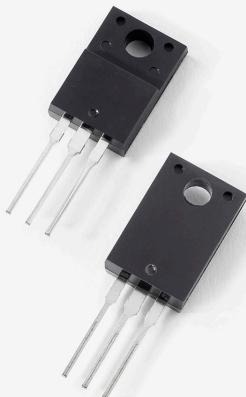
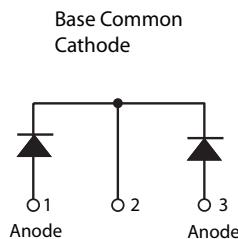


# DURF3060CT



## Circuit Diagram



## Description

Littelfuse DUR series Ultrafast Recovery Rectifier is designed to meet the general requirements of commercial applications by providing low Trr, 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
- Pb-free E3 means 2nd level interconnect is Pb-free and the terminal finish material is tin(Sn) (IPC/JEDEC J-STD-609A.01)
- configuration in electrically isolated ITO-220AB package

## 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 $V_r@T_c = 105^\circ C$ , 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, $T_J = 25^\circ C$	1.71	2.03	V
	$V_{F2}$	@15A, Pulse, $T_J = 125^\circ C$	1.59	-	V
Reverse Current (Per Leg) <sup>1</sup>	$I_{R1}$	@ $V_R = \text{Rated } V_R, T_J = 25^\circ C$	0.54	100	$\mu A$
	$I_{R2}$	@ $V_R = \text{Rated } V_R, T_J = 125^\circ C$	277	1500	$\mu A$
Reverse Recovery Time	$t_{rr1}$	$I_F = 500mA, I_R = 1A, \text{ and } I_{rm} = 250mA$	-	50	ns

Footnote <sup>1</sup>: Pulse Width < 300 $\mu$ s, Duty Cycle <2%

### Thermal-Mechanical Specifications

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

Figure 1: Typical Forward Characteristics

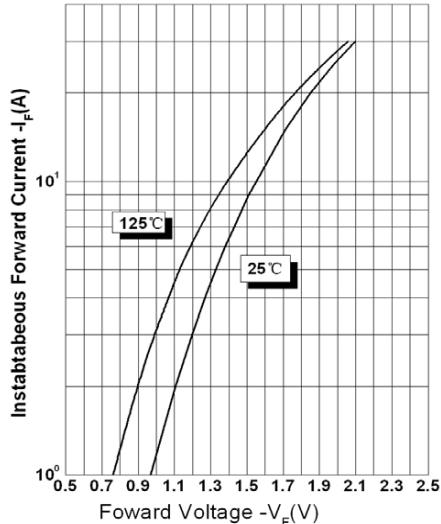


Figure 2: Typical Reverse Characteristics

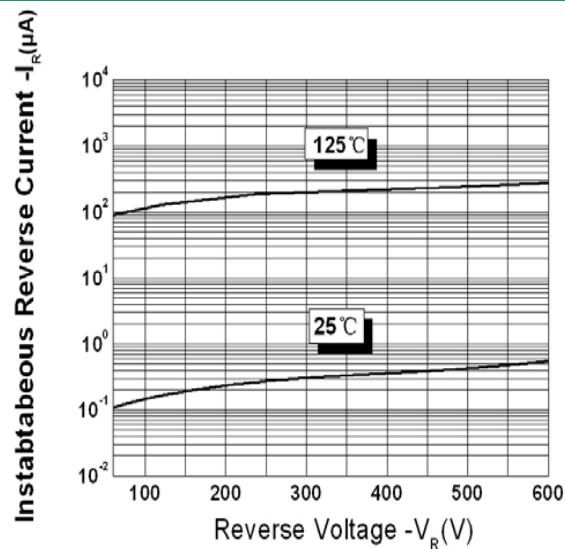
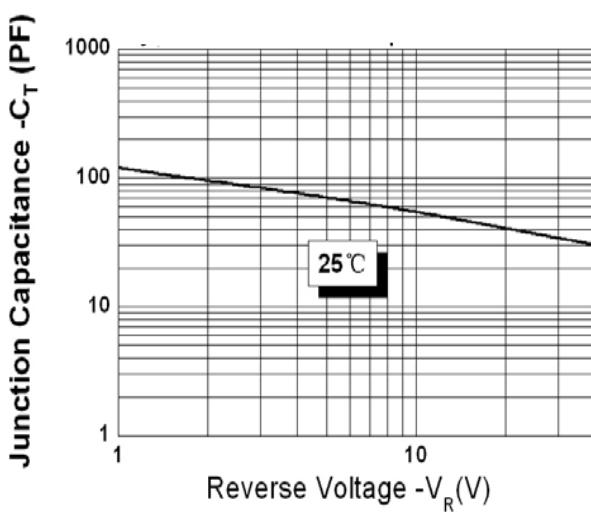
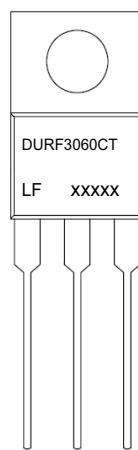


Figure 3: Typical Junction Capacitance



Part Numbering and Marking System

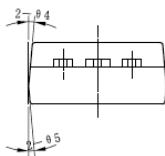
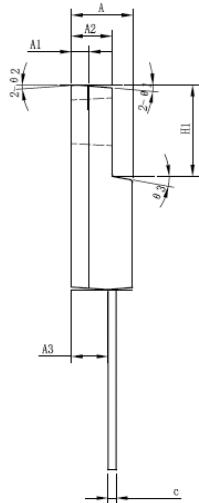
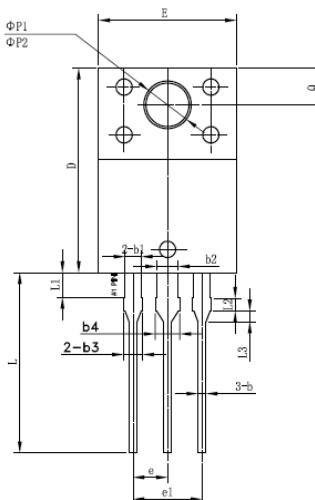


\*xxxxx is YYWWL  
 DUR = Device Type  
 F = Package type  
 30 = Forward Current (30A)  
 60 = Reverse Voltage (600V)  
 CT = Configuration  
 LF = Littelfuse  
 YY = Year  
 WW = Week  
 L = Lot Number

### 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
ΦP1	3.30	3.50	3.70
ΦP2	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

