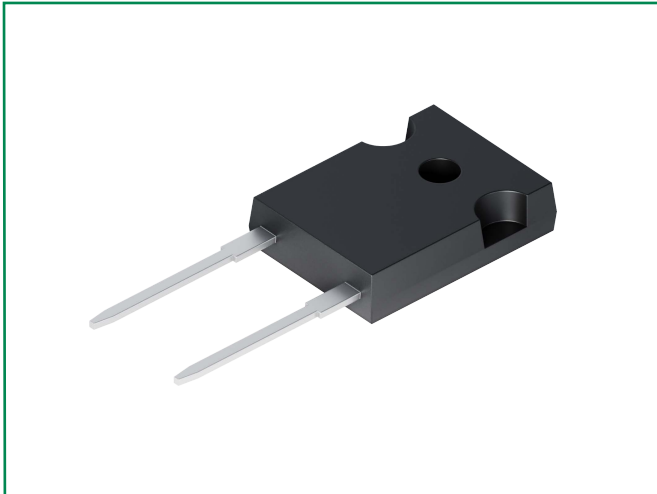


DUR6060W



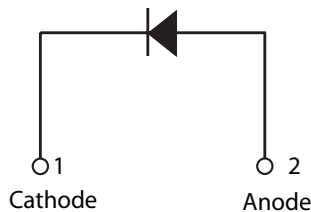
Description

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
- Single die in two-leaded TO-247AC 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 Rectifier Forward Current	$I_{F(AV)}$	Rated V_r , @ $T_c = 70^\circ\text{C}$,	60	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half sine pulse	600	A

Electrical Characteristics

Characteristics	Symbol	Conditions	Max.	Unit
Forward Voltage Drop ¹	V_{F1}	@60A, Pulse, $T_j = 25^\circ\text{C}$	2.0	V
Reverse Current ¹	I_{R1}	@ V_R = Rated V_R , $T_j = 25^\circ\text{C}$	100	μA
	I_{R2}	@ V_R = Rated V_R , $T_j = 125^\circ\text{C}$	14	mA
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 μs , 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	0.75	°C/W
Approximate Weight	wt	-	6.7	g
Case Style	-	TO-247AC	-	-

Figure 1: Typical Forward Characteristics

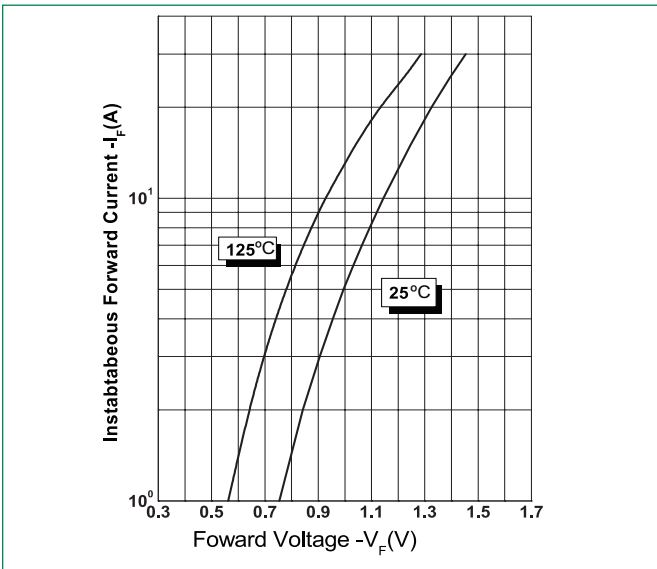


Figure 2: Typical Reverse Characteristics

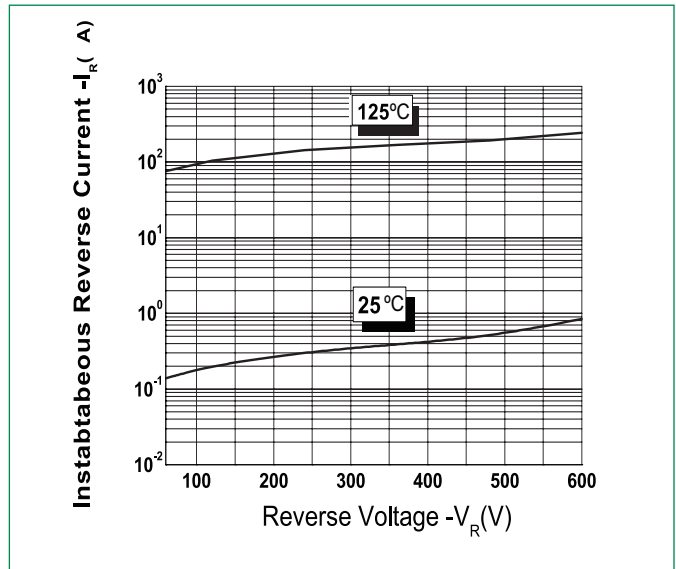
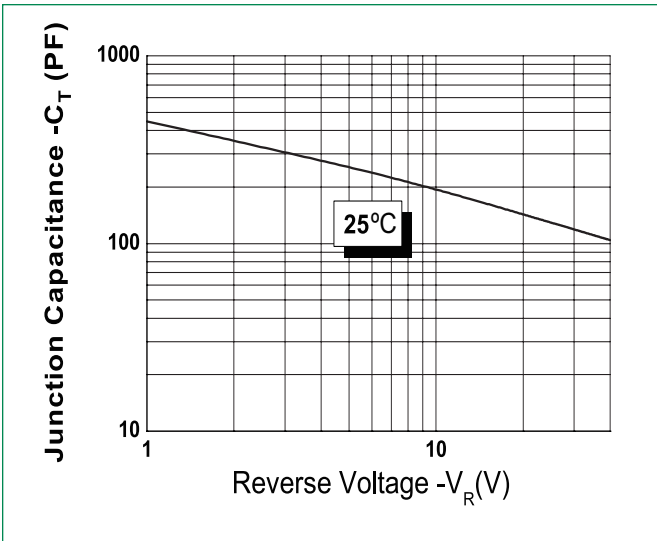
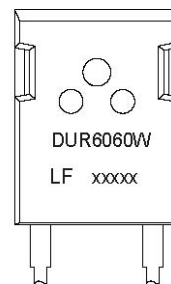


Figure 3: Typical Junction Capacitance



Part Numbering and Marking System



Where XXXXX is YYWWL

DUR = Device Type
 60 = Forward Current (60A)
 60 = Reverse Voltage (600V)
 W = Configuration
 LF = Littelfuse
 YY = Year
 WW = Week
 L = Lot Number

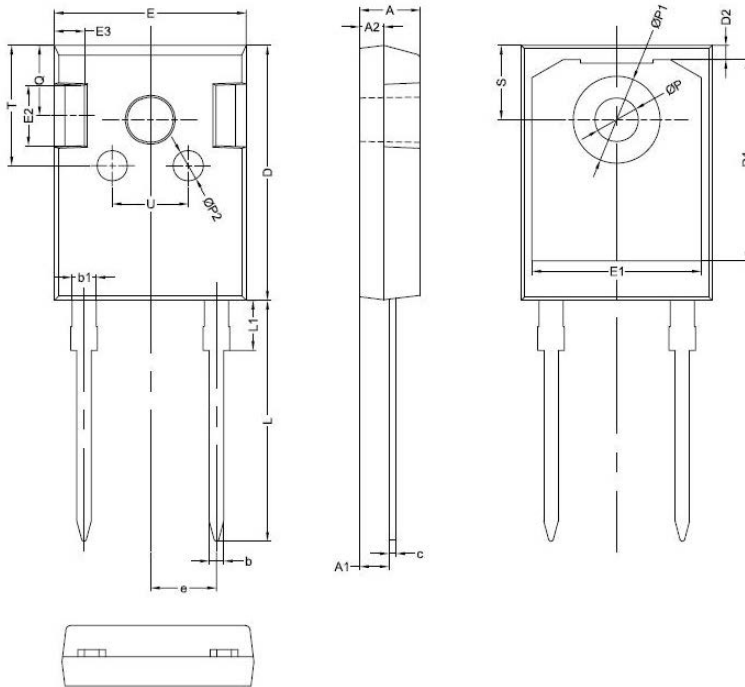
Ultrafast Recovery Rectifier

DUR6060W, 60A, 600V, TO-247AC

Packing Options

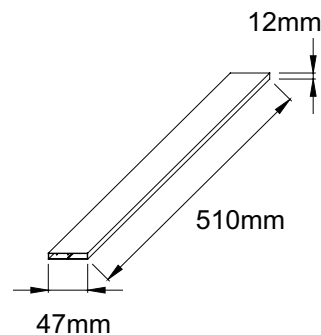
Part Number	Marking	Packing Mode	M.O.Q
DUR6060W	DUR6060W	30 pcs/Tube	21000

Dimensions-Package TO-247AC



Symbol	Millimeters		
	Min	Typ.	Max
A	4.80	5.00	5.20
A1	2.20	2.41	2.61
A2	1.90	2.00	2.10
b	1.10	1.20	1.35
b1	1.80	2.00	2.20
c	0.50	0.60	0.75
D	20.30	21.00	21.20
D1	–	16.58	–
D2	–	1.17	–
E	15.60	15.80	16.00
E1	–	14.02	–
E2	–	5.00	–
E3	–	2.50	–
e	–	5.44	–
L	19.42	19.92	20.42
L1	–	4.13	–
P	3.50	3.60	3.70
P1	7.1	7.19	7.40
P2	–	2.50	–
Q	–	5.80	–
S	6.05	6.15	6.25
T	–	10.00	–
U	–	6.20	–

Tube Specification TO-247AC



Disclaimer Notice

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at <http://www.littelfuse.com/disclaimer-electronics>.



Part of: