

**Fast Recovery Diodes**  
**Reverse Voltage – 1000 Volts**  
**Forward Current – 30 Amperes**

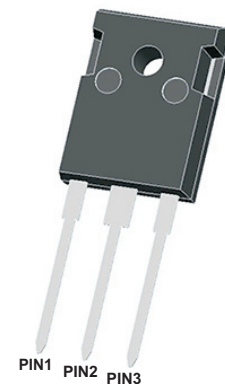
**Features**

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7s, per JESD 22-B106

**Mechanical data**

- Case: TO-247-3L
- Approx. Weight: 6.3g ( 0.22oz)
- Lead free finish, RoHS compliant
- Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.

TO-247-3L



SYMBOL

  
 ROHS  
 COMPLIANT



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

PARAMETER	Symbols	FR30100WD	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1000	V
Maximum RMS voltage	$V_{RMS}$	700	V
Maximum DC blocking Voltage	$V_{DC}$	1000	V
Maximum Average Forward Rectified Current @Tc=100°C	$I_{F(AV)}$ per leg per device	15 30	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	250	A
Instantaneous forward voltage at 15A	$V_F$ per leg	1.60	V
Maximum instantaneous reverse current at rated DC blocking voltage	$I_R$ Ta=25°C Ta=125°C	10 500	uA
Maximum Reverse Recovery Time NOTE 1	trr	150	ns
Maximum Thermal Resistance Junction To Case	$R_{\theta JC}$	4	°C/W
Operation Junction Temperature and Storage Temperature	$T_j, T_{stg}$	-55 ~ +150	°C

NOTE 1: Reverse recovery test conditions  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$



Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

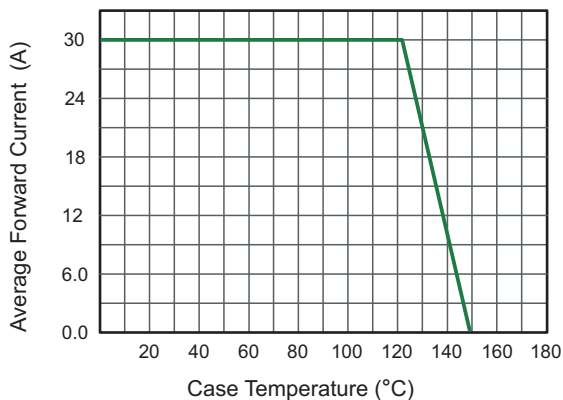


Fig.2 Typical Reverse Characteristics

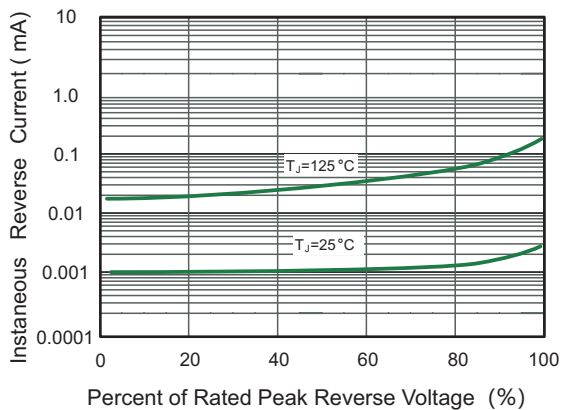


Fig.3 Typical Forward Characteristics

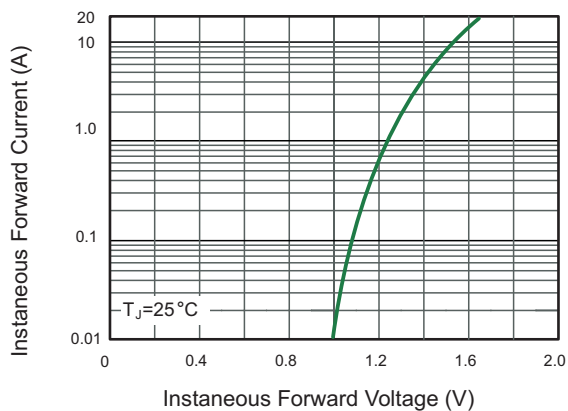
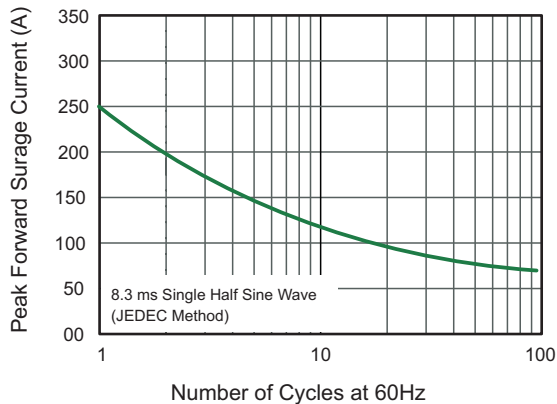


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

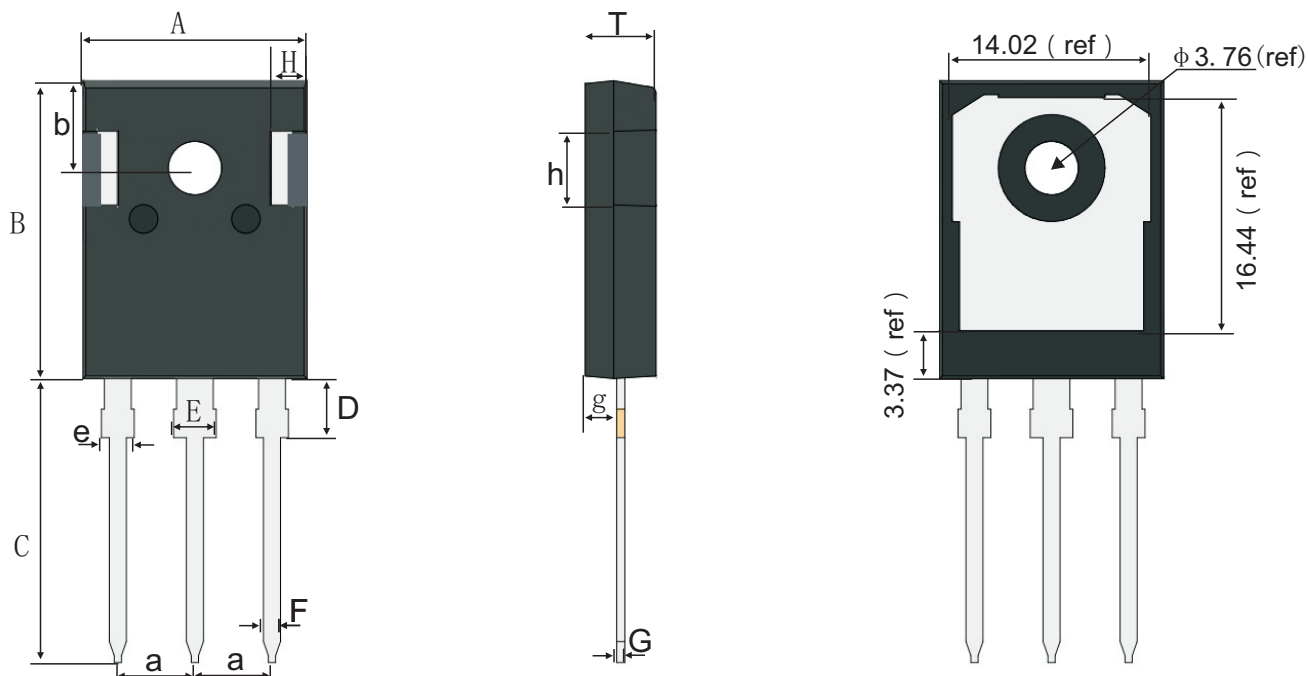




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

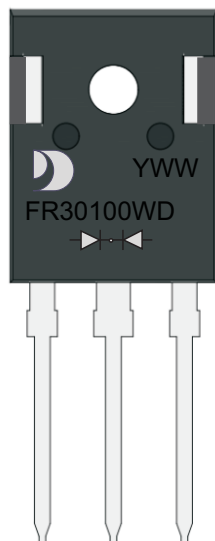
TO-247-3L



TO-247-3L mechanical data

UNIT		A	B	b	C	D	E	e	F	g	G	T	t	a	H	h
mm	max	16.01	21.18	6.26	20.2	4.25	3.15	2.20	1.30	2.49	0.70	5.20	2.21	5.54	2.71	5.37
	typ	15.81	20.98	6.16	20.0	4.15	3.00	2.05	1.20	2.39	0.60	5.00	2.01	5.44	2.51	5.17
	min	15.61	20.78	6.06	19.8	4.05	2.85	1.90	1.10	2.29	0.50	4.80	1.81	5.34	2.31	4.97
mil	max	630	834	246	795	167	124	87	51	98	28	205	87	218	107	211
	typ	622	826	243	787	163	118	81	47	94	24	197	79	214	99	204
	min	615	818	239	780	159	112	75	43	90	20	189	71	210	91	196

MARKING DIAGRAM



YWW: Date Code  
Y: Years(0~9)  
WW: Week  
FR30100WD: Product name  
(NOTE: The weekly code is based on the actual number of weeks in the calendar year.)



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