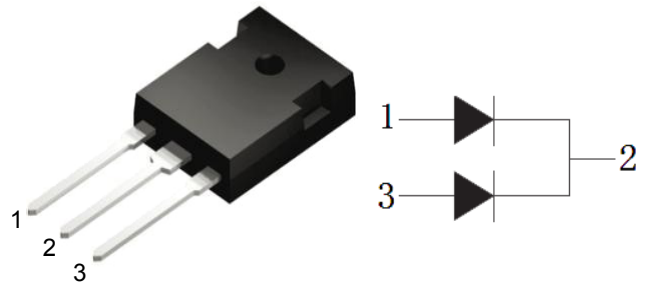


## Fast Recover Diode in TO-247

### Features

- Reverse Voltage 400V
- Fast Recovery, trr = 29ns
- Operating Temperature 150 °C
- Avalanche Energy Rated



### Mechanical Data

- **Case:** TO-247 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- Switch Mode Power Supplies
- Hard Switched PFC Boost Diode
- UPS Free Wheeling Diode
- Motor Drive FWD
- SMPS FWD

### Absolute Maximum Ratings

Symbol	Parameter	Value	Units
$V_{RRM}$	Peak Repetitive Reverse Voltage	400	V
$I_{F(AV)}$	Diode Continuous Forward Current ( $T_C=100^\circ\text{C}$ )	20	A
$I_{FRM}$	Repetitive Peak Surge Current (20kHz Square Wave)	40	A
$I_{FSM}$	Nonrepetitive Peak Surge Current for Per Diode (Halfwave 1 Phase 50Hz)	100	A
$T_J$	Operating JunctionTemperatureRange	-55 to +150	°C
$T_{STG}$	StorageTemperatureRange	-55 to +150	°C

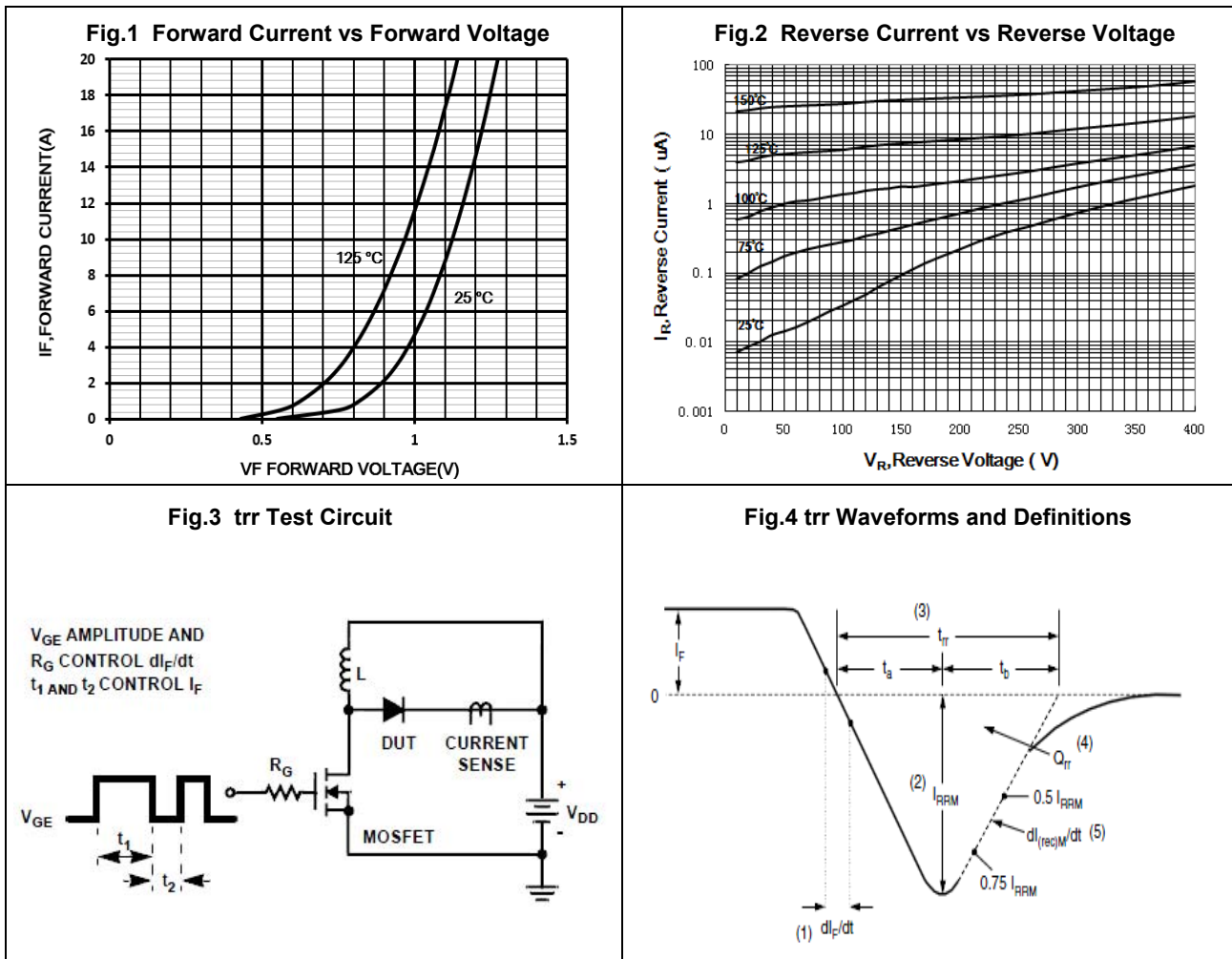
### Electrica Specifications ( $T_J = 25^\circ\text{C}$ unless otherwise specified for Per Diode)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
$V_R$	Cathode to Anode Breakdown Voltage	$I_R = 100\mu\text{A}$	400			V
$V_F$	Diode Forward Voltage	$I_F=10\text{A}T_C=25^\circ\text{C}$		1.10	1.3	V
	Diode Forward Voltage	$I_F=10\text{A}T_C=125^\circ\text{C}$		1.00		V
$I_{RM}$	Maximum Reverse Leakage Current	$V_R=400\text{V}T_C=25^\circ\text{C}$			100	$\mu\text{A}$
		$V_R=400\text{V}T_C=125^\circ\text{C}$			1	mA

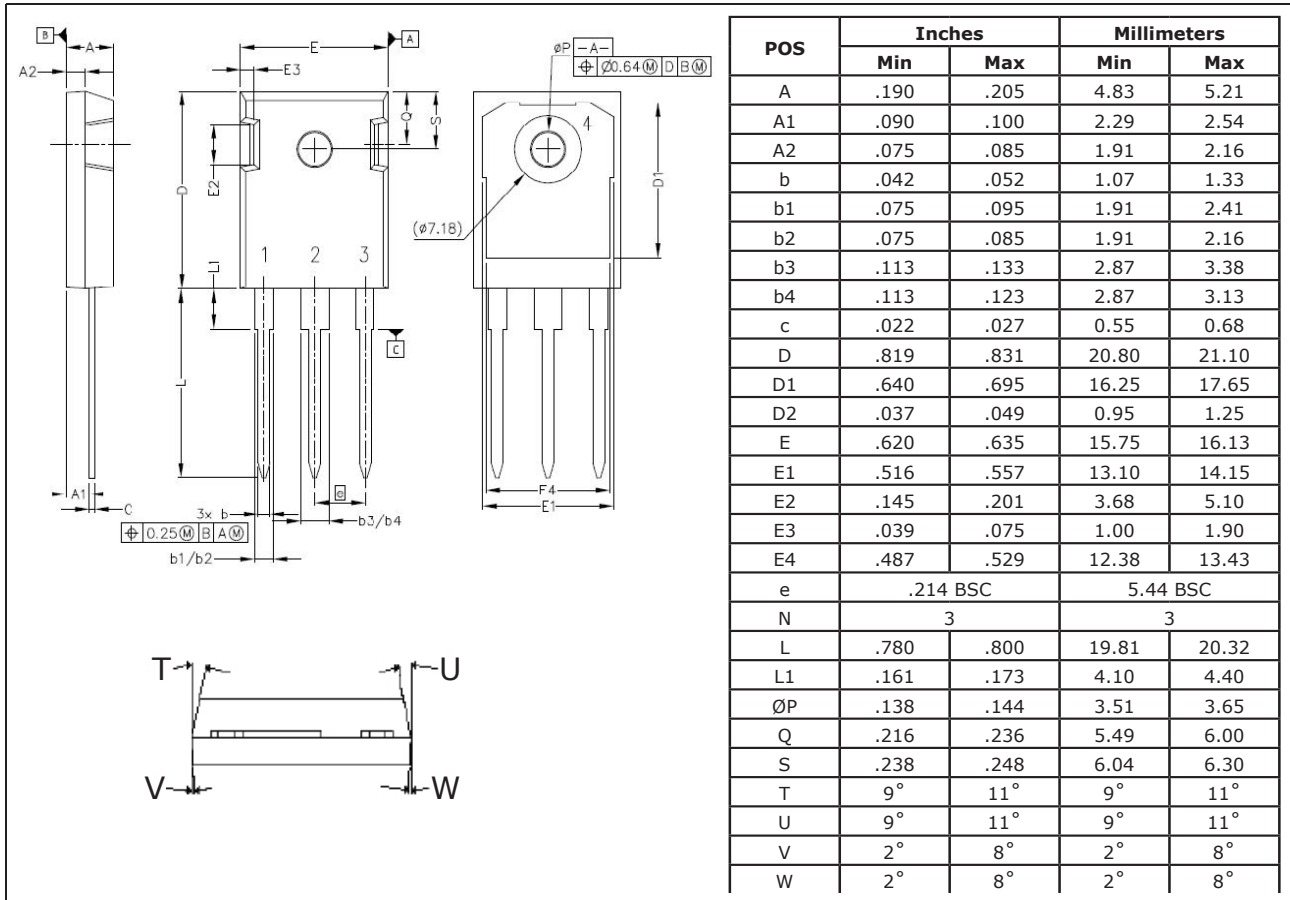
## Dynamic Recovery Characteristics (TC=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
$I_{RRM}$	Diode Peak Reverse Recovery Current	$V_{DD}=30V; I_F=1A;$ $di_f/dt=100A/\mu s;$ <b>See Fig.4</b>		1.53		A
$Q_{rr}$	Reverse recovery charge (Area Under the Curve Defined by $I_{RRM}$ and $t_{rr}$ ).			24.5		nc
$t_{rr}$	Diode Reverse Recovery Time			29	35	ns
$S$	$S= t_b/t_a$			0.7		
$I_{RRM}$	Diode Peak Reverse Recovery Current	$V_{DD}=300V; I_F=10A;$ $di_f/dt=500A/\mu s;$ <b>See Fig.4</b>		9.1		A
$Q_{rr}$	Reverse recovery charge (Area Under the Curve Defined by $I_{RRM}$ and $t_{rr}$ ).			200		nc
$t_{rr}$	Diode Reverse Recovery Time			35.5	45	ns
$S$	$S= t_b/t_a$			0.5		

## Typical Characteristics (T<sub>amb</sub> = 25 °C unless otherwise specified)



## Package Dimensions



## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CXD2040HD	TO-247	Tube/BOX	2000pcs / BOX	

## Revision history

Date	Revision	Changes
23-May-2012	1.0	Initial release

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