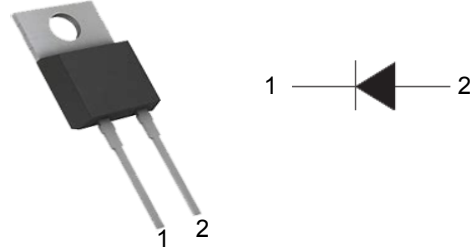


## Fast Recover Diode in TO-220AC

### Features

- Reverse Voltage 600V
- Fast Recovery, trr = 35ns
- Operating Temperature 175°C
- Avalanche Energy Rated



### Mechanical Data

- **Case:** TO-220AC (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 <sub>RRM</sub>	Peak Repetitive Reverse Voltage	600	V
I <sub>F(AV)</sub>	Diode Continuous Forward Current ( T <sub>C</sub> =100°C)	15	A
I <sub>FRM</sub>	Repetitive Peak Surge Current (20kHz Square Wave)	30	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current for Per Diode (Halfwave 1 Phase 50Hz)	180	A
T <sub>J</sub>	Operating JunctionTemperatureRange	-55 to +150	°C
T <sub>STG</sub>	StorageTemperatureRange	-55 to +150	°C

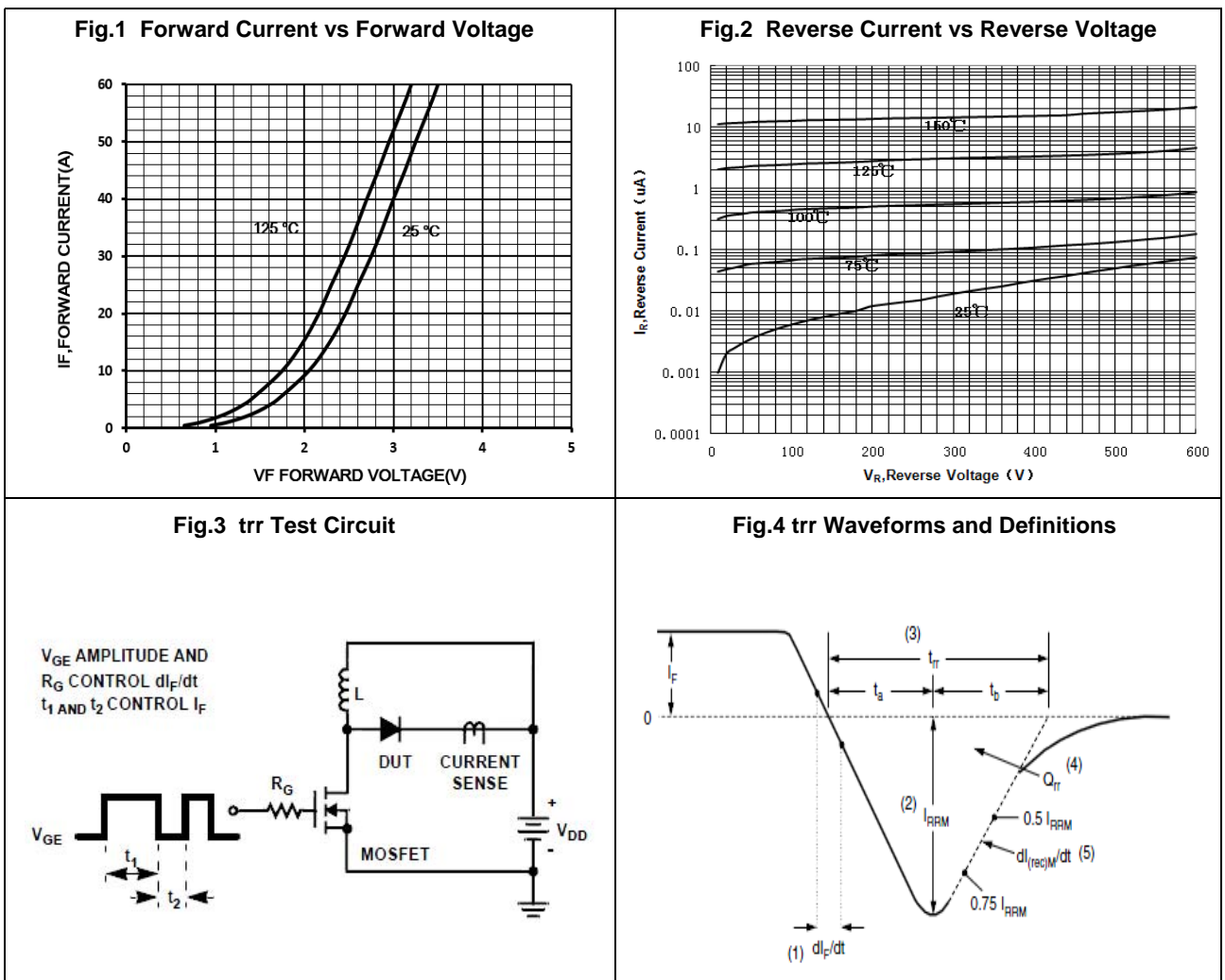
### Electrica Specifications (T<sub>J</sub> = 25 °C unless otherwise specified for Per Diode)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V <sub>R</sub>	Cathode to Anode Breakdown Voltage	I <sub>R</sub> = 100µA	600			V
V <sub>F</sub>	Diode Forward Voltage	I <sub>F</sub> =15A, T <sub>C</sub> =25°C		1.35	1.6	V
	Diode Forward Voltage	I <sub>F</sub> =15A, T <sub>C</sub> =125°C		1.15		V
I <sub>RM</sub>	Maximum Reverse Leakage Current	V <sub>R</sub> =600V, T <sub>C</sub> =25°C			100	µA
		V <sub>R</sub> =600V, T <sub>C</sub> =125°C			1	mA

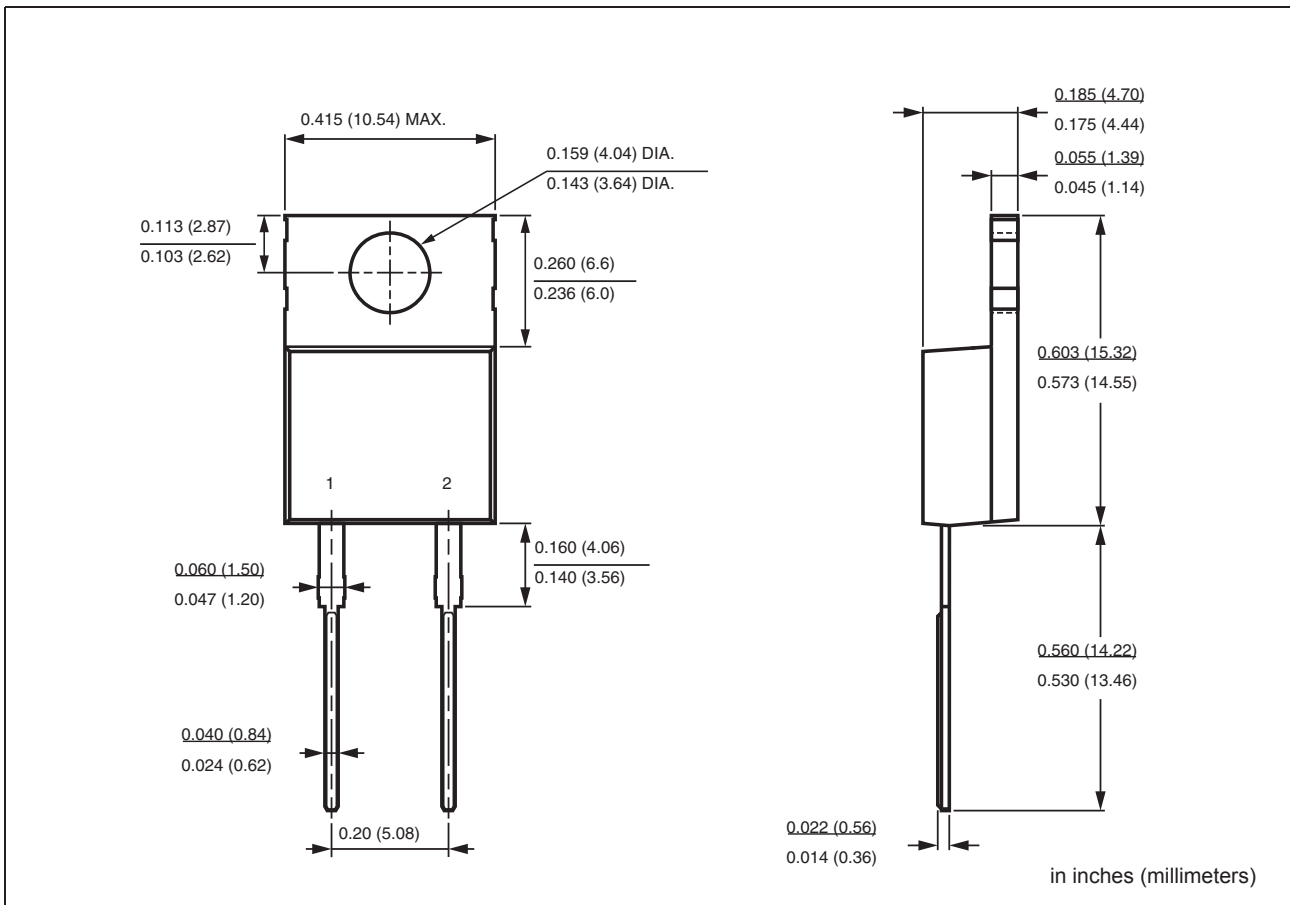
**Dynamic Recovery Characteristics** ( $T_C=25^\circ\text{C}$  unless otherwise specified )

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
$I_{RRM}$	Diode Peak Reverse Recovery Current	$V_{DD}=30\text{V}; I_F=1\text{A};$ $di/dt=100\text{A}/\mu\text{s};$ See Fig.4		1.68	1.94	A
$Q_{rr}$	Reverse recovery charge (Area Under the Curve Defined by $I_{RRM}$ and $t_{rr}$ ).			35	44	nc
$t_{rr}$	Diode Reverse Recovery Time			36	42	ns
$S$	$S= t_b/t_a$			0.78		
$I_{RRM}$	Diode Peak Reverse Recovery Current	$V_{DD}=400\text{V}; I_F=15\text{A};$ $di/dt=500\text{A}/\mu\text{s};$ See Fig.4		9.3	11	A
$Q_{rr}$	Reverse recovery charge (Area Under the Curve Defined by $I_{RRM}$ and $t_{rr}$ ).			398	552	nc
$t_{rr}$	Diode Reverse Recovery Time			73	95	ns
$S$	$S= t_b/t_a$			1.9		

**Typical Characteristics** ( $T_{amb} = 25^\circ\text{C}$  unless otherwise specified)



## Package Dimensions



## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CXD1560P	TO-220AC	Tube/BOX	2000pcs / BOX	

## Revision history

Date	Revision	Changes
23-May-2012	1.0	Initial release

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