

FCU20D40

2.Production

Fast recovery diodes are PN junction diodes with the same structure and function as general rectifier diodes. While general rectifier diodes are suitable for commercial frequency rectification, fast recovery diodes are suitable for high frequency rectification due to their fast reverse recovery time (trr).



Distributor Inventory

Stock Check

Application Specifications Packaging Specifications Environmental data FAQ Related Glossary

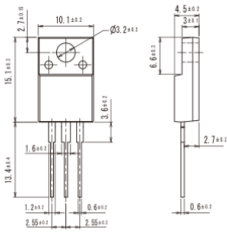
Application

Power supplies, Industrial Equipment

Environmental data

RoHS Compliance	Yes
RoHS_FCU20D40.pdf (458.80KB)	
TSCA_FCU20D40.pdf (47.61KB)	

Specifications

Series	TF
Outline	TO-220 Full-Mold 
VRRM [V]	400V
IO [A]	20.0A
IFSM [A]	120.0A
IR [mA]	0.030mA
VF [V]	1.53V
trr [ns]	40.0ns
Operating Temperature Range	-40°C ~ 150°C
Rth(j-c) [°C/W]	2.00°C/W
Connection type	E
Packaging style	Tube
Quantity per Package	50
Weight	1.750g

Packaging Specifications

Packaging style	Tube
Quantity per Package	50
Weight	1.750g

FAQ

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Usage	Q. I want to use FRD products connected in series directly. Is there anything I have to pay attention?	—
It would be difficult to secure voltage balance in two high-speed FRDs connected in series directly (Connection where voltage protection is not coordinated). Especially for the commutation surge voltage in high-speed switching, shared voltage varies largely due to difference in reverse recovery characteristics of the two devices. Thermal influence of other components and exoergic environment also affect the difference largely. Therefore, it is possible that 100% of voltage would be applied to one device. In order to suppress such differences, it is necessary to add a voltage dividing capacitor to each device to share the differences. There is no specified capacitance value for such voltage dividing capacitors because the value varies depending on the operating conditions. It is necessary to make sure whether the voltage can be surely shared by the capacitors so that their capacitances could be between several tens pF and several hundreds pF. Ripping can be suppressed by these capacitors. In order to divide the steady reverse voltage in half, resistors in parallel are also required. That is to say, adding capacitors or resistors is an only way to balance voltage. The point is that adding a resistor or a capacitor is an only way to get the voltage balance.		
Characteristic	Q. Which do various characteristic graphs show the typical values or the maximum values?	+
Reliability	Q. What is MSL (Moisture Sensitivity Level)?	+
Reliability	Q. What are storage conditions for power device products?	+
Purchase	Q. Where are your sales agents?	+

Related Glossary

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Fast Recovery Diode (FRD)	—
PN type junction rectifying device. Diodes suitable for rectifying high frequency power supply with short reverse recovery time (trr). Related Products Discretes Fast Recovery Diodes (FRD) FRD/SBD Modules	
Reverse Recovery Time (Trr)	+
DIP	+
Repetitive Peak Reverse Voltage (VRRM)	+
Diode	+

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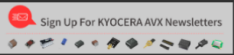
MSL (Moisture Sensitivity Level) List

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